BURMA GAZETTEER

TOUNGOO DISTRICT

VOLUME A

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PREFACE.

THANKS are due to the officials and others who have supplied materials for the compilation of the Gazetteer, and particularly to Messrs. N. V. Holberton, S. F. Hopwood, F. W. Collings and E. V. Ellis of the Imperial Forest Service.

In the shorter articles (Chapter XIV) the numbers of houses of villages are given according to the statements of headmen for the year 1913, only those being included which can be considered as forming the main block of the village with nearly-adjoining hamlets. The census-figures of population, being collected by village-tracts, are of course useless for the purposes of the articles.

The Gazetteer has been compiled by Mr. B. W. Swithinbank, I.C.S., Assistant Settlement Officer.

S. A. SMYTH,
Settlement Officer, Toungoo.

November 6th, 1913.

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BURMA GAZETTEER.

TOUNGOO DISTRICT.

CHAPTER I.

PHYSICAL DESCRIPTION.

Situa and a

Toungoo, the most northerly district in the Tenasserim Division of Lower Burma, lies between north latitudes 17° 33' and 19° 20' and east longitude 95° 48' and 97° 13', with an area of 6,172* square miles. To the north is the Yamèthin district of Upper Burma; to the east, the Southern Shan States, Karenni (the country of the Red Karens), and the Salween district of Lower Burma; to the south, the Thatôn and Pegu districts; and to the west, the Tharrawaddy Prome and Thayetmyo districts of Lower Burma.

Boun ries.

The boundaries of the district, which have never been officially notified, are locally recognized as follows: on the north, a line of masonry pillars, in latitude about 19° 28' north, running from the crest of the Pegu Yoma range almost due east to the crest of the Kalai range; thence the crest of the Taumade, Gamôn, Paunglaung, Nattaung and Bilin ranges (forming the watershed between the rivers Sittang and Salween) to the source of the Kyônpagu stream; thence the Kyônpagu stream to its junction with the Sittang below Shwegyin; thence the Sittang to the mouth of its tributary the Kun stream; thence the Kun stream to its source in the Pegu Yoma range; thence the crest of the Pegu Yoma range (forming the watershed between the rivers Sittang and Irrawaddy) to the starting-point. The northern boundary was laid down by Lord Dalhousie in 1853, after the annexation of the province of Pegu, as the frontier between British Burma and the kingdom of Ava;

* This is the area given in the Census Report of 1911. The area as calculated by planimeter is 6,168 square miles.

the southern boundary has been altered from time to time, *e.g.*, in 1864 when the Bawni circle, which now forms part of the Pegu district, was transferred from Rangoon district to Toungoo, and in 1870 when the same circle was again transferred to the Shwegyin district : and in 1895 the area was largely increased by the inclusion of the Shwegyin and Kyaukkyi townships of the Shwegyin district, the remainder of which was split up between Pegu and Thatôn. On the eastern and western borders the scarcity of population has hitherto rendered an accurate delimitation unnecessary.

The district consists of the central portion of the Sittang basin—a valley running from north to south, broadening as it gets nearer to the sea ; and a confused mass of hills on either side, sending out numerous spurs which in some places almost reach the bank of the river. The Paunglaung and Nattaung ranges on the east rise somewhat abruptly, and some of the ridges attain a height of over 5,000 feet, while there are single peaks of over 6,000. The Pegu Yoma on the west, although the foothills are in many places rugged and broken, rises more gradually and hardly ever attains an elevation of more than 2,000 feet. Owing, however, to the irregular and barren nature of the country, this chain forms as effective a boundary as the eastern range, and is probably even less frequently and systematically crossed by travellers and traders.

The river-system of the district is as simply described as the mountains. The Sittang (properly Sittaung, and known in the north of the district as the Paunglaung stream and further south as the Toungoo river) rising in the Shan Hills to the north-east and, turning south before it enters the district, flows through the middle in a winding course, but with a general southerly direction, and drains the whole area. Numerous sandbanks render navigation difficult and its meanderings detract from its value as a commercial waterway, while the Rangoon-Mandalay Railway has taken its place as the principal means of communication of the district; but in the southern portion there is considerable traffic, mostly in native boats and rafts conveying grain, plantains, thatching-grass, pottery and other commodities. The channel is narrow and tortuous, and quite unable in the lower valley to cope with the volume of water which descends from the hills after heavy rain ; so that it yearly floods extensive areas near its banks and, indirectly, a still greater extent of country by checking the outflow of its tributaries which consequently spread their

flood-water collect in extensive depressions fringing the river's course thus forming swamps which do not dry up until several months after the rains have ceased and the river fallen to its cold weather level. These depressions generally indicate changes in the course of the Sittang, which has deserted them and cut out a new channel, gradually eroding the soil and then breaking for itself a more direct path to the sea. As a waterway for extracting timber and bamboos from the forest-covered hills, the Sittang is of the highest importance. It is fed with produce by its numerous tributaries, some of which are kept clear and embanked at much expense to give a free course to the floating logs.

Tributaries :- Left bank.

The principal affluents on the left bank are the Thaukyegat, flowing from the north-east corner of the district and joining the main stream a few miles south of Toungoo; the Yaukthawa, forming in its lower course the boundary between the Pyu and Shwegyin subdivisions; the Môn, irrigating the valuable betel-nut gardens of Midaingdaw and flowing in just below the Yaukthawa; the Kyaukkyi stream, rising in the swamps south of Môn village, and running roughly parallel to the Sittang till it joins it above Shwegyin; and the Shwegyin stream, rising in the Nattaung hills and flowing in a general southerly direction along a narrow valley till it turns west to join the river at Shwegyin.

Tributaries Right bank.

On the right bank and draining the eastern slopes of the Pegu Yoma are the Swa, rising in the north-west corner of the district, and flowing into the Sittang a few miles north of Yedashe; the Kabaung, which joins the main stream just below the town of Toungoo; the Pyu, which meets the river at the same point as the Yaukthawa from the opposite direction; and the Kun, which divides the Toungoo from the Pegu district and joins the Sittang seven miles to the south-west of Kyaukkyi.

Geology.

The rocks of the Pegu Yoma are, so far as is known, entirely of tertiary age, consisting of miocene beds of shale and sandstone belonging to the Pegu group. The ranges to the east of the Sittang are far more ancient and are composed principally of crystalline gneissic rocks; in the north-east of the district there are outcrops of harder rock of a granitoid type. The centre of the district consists of the Sittang alluvium, merging in the north-west into fossil-wood beds which are almost entirely denuded. Large quantities of limestone are found in parts of Toungoo township; granite is quarried at Myogyi near Toungoo; and in the south of the district is a great belt of laterite.

The geology of Toungoo presents no features of special interest.

The district is well supplied with game-animals. Elephant, bison, *saing* (wild ox), sambar, pig, tiger, leopard (ordinary and clouded), bear (two kinds), and barking-deer are plentiful among the western hills. Rhinoceros also are to be found in certain places in this region, but are not common. Hog-deer inhabit the patches of elephant and other grasses which occur in many places on the flat ground near the Sittang, and there are a few *thamin* (brow-antlered deer) in the Pyu subdivision. Most of the animals mentioned above are also found east of the Sittang, but are much scarcer owing to the denser population and the destructive power of the Karens. Serow and gooral occur in the eastern hills but, unless exceptionally, not on the Pegu Yoma. Other animals found are, wild dogs (two kinds), two or three species of monkey, civet, toady and other kinds of jungle-cat, otter, porcupine, mongoose, various kinds of squirrel, and the flying-fox.

The following game-birds are met with:—pea-fowl, jungle fowl, silver pheasant, Chinese francolin, hill-partridge (two species), plover (several species), teal (five species), green pigeon (four species), imperial pigeon (two species), purple wood-pigeon, comb and Brahminy duck, quail (two or three species), snipe (common and pintail plentiful, jack and painted snipe rare), and woodcock (rare). A very large variety of birds is met with, particularly in the Karen Hills. A list of birds found in the neighbourhood of Thandaung was published in the Journal of the Bombay Natural History Society in 1911-12.

The following important species of butterflies have been recorded:—

Pegu Yoma.—

Apatura ambica.
,, parisatis.
Eulepis delphis.
Thauria pseudaliris.

Karen Hills.—

Aemona lena (Atkinson).
Helagra hemina (Hew).
Neurosigma nonius (de N.).
Euthalia taooana (Moore).
Euthalia franciae (Gray).
Calingana Sudassana (Melvill).

Prothoe belisama (Crowley).
Lycaenidiae—Cheritella truncipennis (de N.).
Pieridae—Dercas Verhuelli (V. d. Hoeven).
Papilionidae—Papilia Noblei (de N.).
Papilia payeni (Db.).
Teinopalpus imperatrix (sp. nov.).

A list of insects caught in the Karen Hills is to be found in the Journal of the Bombay Natural History Society for 1899 (Volume XII, page 329).

Snakes and Lizards.

Snakes are fairly common throughout the district but most of those usually seen are non-poisonous. The commonest is perhaps the *linmwe* or rat-snake, which is found in swamps and paddy-fields. In Toungoo town a small green grass-snake is often met with. The *sabagyi* or rock-python is found on both banks of the Sittang, especially in dry *indaing* forest. It grows to a large size and feeds on animals up to the size of a barking-deer. Of poisonous snakes, the Russell's viper or *mwebwe*, the green pit-viper, the cobra or *mwehauk*, the banded krait and the hamadryad are found. The last-named is common in the west of the district. The lizards include the *tauktè* (tuktoo), the *put* or so-called iguana, and the *padat*. The flesh of these two latter is highly esteemed by Burmans, who dispel any qualms of conscience they may have with regard to the taking of life by dislocating each leg, thus causing a lingering but, in their opinion, a natural death. The eggs of the *put* are also considered a delicacy and are largely eaten in the form of curry. Two varieties of tortoise are found; they are eaten and their shells made use of for ladling out oil. Turtles are found in tanks or deep pools in streams.

Fish.

There are a great many kinds of fish in the Sittang river and the larger streams of the plains the commonest are the *ngamyin* or butter-fish, *ngabat* or fresh-water shark, and *ngaywe* or catfish; in the Thaukyegat and the mountain-streams the *ngagyin* or mahseer and the *ngahlwa* or Indian trout are abundant. These two species are caught on a rod by spinning and also occasionally take a fly. Every year practically every pool in the Thaukyegat stream is poisoned by Karens in the hot weather. Large bamboo dams are built across the rapids at the end of each pool. The bark of the root of a climbing plant obtained in the forests near Pathichaung is then beaten on stones in the river. This makes the water very thick; the fish are unable to breathe and float down to the dams, where they are easily captured.

Ngamwe or eels and ***pazun*** or prawns are found in all streams.

Climate. Toungoo considered climatically falls into what is known as the sub-deltaic region of Lower Burma, marking the transition from the dry zone in the north to the wet deltaic and sea-coast districts of the south. The Sittang plain is fairly healthy; the forest-clad ranges to the east and west are malarious in the rainy season and for some time after its close; and the tarai lying immediately at the foot of the hills is at all times somewhat unhealthy for strangers.

Rainfall. The rainfall shows a wide range of variation, Thandaung having one of the highest figures recorded in the province, while the fall at Yedashe is not greatly in excess of that in some parts of the dry zone of Upper Burma. There are six recording-stations in the district, and the following table, giving the average for the three years 1910—1912, shows how the rainfall increases as you go southward; while the eastern hills, which arrest the progress of the monsoon from the south-west and cause the clouds to break on their slopes, have a much higher fall than the western parts of the district.

Yedashe,	70 inches.	Pyu,	98 inches.
Thandaung,	225 ,,	Kyaukkyi,	128 ,,
Toungoo,	87 ,,	Shwegyin,	132 ,,

Nearly the whole of the fall comes in six months, from May to October, and the wettest months are July and August; in the dry season from December to March there are seldom any considerable showers but, even at the height of the hot weather, the country never presents that burnt-up appearance which is so familiar in Upper Burma.

Temperature and monsoon. Temperature is recorded only at Toungoo, where the highest reading registered (1912) was 105·6°, the lowest 53·4°, and the annual mean temperature 78·4. The following figures show the diurnal range of temperature in the coldest and hottest months, and in the early rains :—

	December.	April.	July.
Average maximum ...	82·7°	101·2°	88·5°
Average minimum ...	58·6°	75·5°	75·6°

The climate of the hills is of course much cooler, and at Thandaung the thermometer rises little above 70° even in the hot season. The heat in the plains is probably more oppressive, owing to the moisture in the air, than in the actually much hotter regions of Upper Burma. The prevailing wind is from the north during the cold weather, which lasts from the middle of November to the middle of

February, and from a direction east of south for the rest of the year, the monsoon following the valley of the Sittang.

Trigonometrical Survey.—The district is traversed by the Mandalay Meridional Series of the Great Trigonometrical Survey of India, which was observed in the seasons 1889-90 and 1890-91. Fourteen stations and fixed points fall within the district.

Geographical Survey.—Geographical surveys were carried out over portions of the district between the years 1853 and 1866 on the four-inch and one-inch scales, with a view to the preparation of a map on the quarter inch scale. The party employed worked independently until July 1st, 1863, after which date it came under the control of the Surveyor-General and was named the 8th Topographical Pegu Survey.

Topographical Survey.—In 1884-85 a topographical survey was carried out in what was then the Shwegyin district by No. 2 Party. The survey was on the two-inch scale and was based on traverses, the nature of the country not admitting of triangulation. The *kwin* or survey block boundaries were demarcated. Between 1901 and 1907 a one-inch survey was carried out by No. 3 Party, covering most of the district.

Forest Survey.—An area of 1,284 squre miles of forests was surveyed between the years 1884 and 1900, partly on the two-inch and partly on the four-inch scale, by No. 20 Party. This includes both reserved and unreserved forests.

Cadastral Survey.—The following table shows the Cadastral surveys which have been carried out in the district:—

Season.	Nature of Survey.	Scale.	Area, etc.
1896 ...	Original.	16 inch	1·06 sq. miles (Toungoo Cantonment).
1896-97 ...	Do.	Do.	59·00 sq. miles.
1897-98 ..	Do.	Do.	770·00 sq. miles.
1898-99 ..	Do.	Do.	711·00 sq. miles.
1899-00 ...	Do.	64 inch	2·20 sq. miles (Toungoo Town and Civil Station).
1900-01 ...	Do.	16 inch	6·92 sq. miles (betel-nut gardens).
1901-02 ...	Do.	Do.	7·24 sq. miles.
1902-03 ...	Revision.	Do.	35·88 sq. miles (in Pyu township).
1904-05 ...	Do.	Do.	67·38 sq. miles (in Ôktwin and Pyu townships).
1907-08 ...	Original	64 inch	9·92 sq. miles (towns).

Surve

The surveys down to the year 1900 were carried out by No. 7 Party of the Survey of India; those since that date by special agencies locally engaged. Since 1901 over 80,000 acres of pottas have been surveyed, partly by special agency and partly by the ordinary district staff of surveyors.

CHAPTER II.

HISTORY AND ARCHÆOLOGY.

nd- e- ngs.

The legend of the Toungoo district begins with the visit of the Buddha, who in the course of his miraculous travels crossed the Sittang from Pegu and arrived at the hill by Kyaukkyi, where he permitted the hermit Thilawi to impress a footprint on the north face of the rock in memory of his coming. When he desired to wash, water welled up in a rocky depression close by, whence winter or summer it never again dried; and the local *nats* wiped his feet. After a short halt at Kyaungbya, where he pointed out to Ananda his residence in a former existence, he proceeded to the Kabaung valley, and at Kyauksauk, Dinnyawadi, Lawkôktaya (now Myogyi), and Myatsawnyinaung (a few miles east of Toungoo) pointed out his birthplace and spots which he had visited in a previous incarnation, and enjoined the erection of pagodas over his relics. At Myatsawnyinaung he was reverently greeted by a bat, and smilingly predicted that it would some day be a virtuous prince and venerate his relics. The Pyôn stream, a tributary of the Thaukyegat, is named from his smile. Thence he went northwards.

a.

No steps were taken to carry out his orders until some three centuries later, when Asoka, Lord of India, distributed the relics, and the Kyauksauk and Myatsawnyinaung pagodas were built to enshrine them and consecrated amid public rejoicing. After this the country relapsed into barbarism.

ark

For more than a thousand years Toungoo seems to be unknown to history. The southern part of the district perhaps was subject from an early date to the kingdom of Pegu. It is not known how far north those dominions extended; but the Hmannan Yazawin first mentions Myohla, Swa, Kèlin, and Toungoo among the possessions of Anawrata of Pagan, the conqueror of the Talaings. In 1191 A.D., Narapadisithu of Pagan, having visited the Shwedagon and

Pegu, came up the Sittang and discovered the Myatsawnyinaung, Lawkôktaya, and Kyauksauk pagodas overgrown with jungle. He caused them to be cleared and rebuilt and, proceeding up the river, he crdered the reparation of the Myathidin pagoda at the mouth of the Kanni stream. He appointed one Nandathuriya governor of Kabamyin by the Swa and, discovering the Shwelethla and Kandapalin pagodas, founded by Asoka, left money with the governor to rebuild them. This visit of Narapadisithu is not mentioned by the Hmannan Yazawin, but it says that he travelled through Burma, and specially refers to his endowments of religious buildings.

Kyakatwara. Nandathuriya's grandson founded a new and populous city on the north bank of the Swa, which he called Kyakatwara, and reigned there independently of Pagan. In the year 1256 he was conquered and carried off to Pyu below Shwegyin by Wariru, the Shan King of Martaban.

Foundation of old Toungoo. Two sons, Thawungyi and Thawunngè, were born to the king in his captivity, and before his death he directed them, if ever they should escape, to found a town at a place which he described up a tributary of the Sittang. After his death, in 1278, they managed to escape, and going up the Kabaung (by mistake for the Swa) they founded Little Toungoo on a spur of the hills. Hearing that one Karenba from Tihlaing had founded a town higher up on the east bank of the Sittang, they invited his aid and appointed him minister. These three re-discovered the Myatsawnyinaung, which had fallen to pieces, and several other pagodas and a ruined city (Naungbyaung) to the north. Near the Kyauksauk pagoda was a piece of ground which the wise men said was fortunate soil and the seat of an old Toungoo monarchy ; and so, as the city they had built was too small, they founded Toungoo (Dinnyawadi), and repaired many old pagodas. The date of the foundation is given as 1279. The city was situated on the bank of the Pokpè (Pabè) stream, a little above its junction with the Sittang.

Early rulers. During the reign of Thawungyi occurred the Chinese invasion which destroyed the Pagan monarchy ; and the prevailing confusion throughout Burma no doubt favoured the establishment of an independent kingdom in a region remote both from the Irrawaddy and the sea. When Thawungyi had reigned eighteen years, his brother had him murdered while worshipping and reigned in his stead. Thawunngè' found it necessary to acknowledge the overlordship of the Shan king, Thihathu of Pinya. After a reign of seven years, he left an infant son, Sawnit, and a widow, Sawsala, who

conspired to murder Karenba; the minister succeeded in driving her out in the following year and she died in the hills west of Myohla without recovering her kingdom. Karenba reigned for seventeen years, the lord of a hundred and fifty elephants and the founder of many pagodas and *kyaungs* around his capital. He had no sons and was succeeded by his daughter's husband, Letyazeya. In 1344 A.D., he was killed by his brother Taukhlega, who reigned for two years and was murdered by Theingaba, a former minister of Karenba.

Theingaba.

By this time the Toungoo kingdom had profited by the dissensions in Upper Burma and the persecutions of monks, and was recruited by crowds of fugitives. In 1358 the king was able to proclaim his independence and enter into equal alliances with Burmese, Talaing and Shan kings, while he added to his dominions five provinces of Yehlwè (apparently the Shan country), and encouraged trade by the construction of roads through his dominions. He moved his court to Gyobingyi, where he built a palace, traces of which are still to be seen near the village of Gyobinzeik on the Chaungmangè stream.

Pyanchigyi.

On his death in 1367* his son Pyanchigyi came from Pegu and took his seat on the throne. This king was religious and a great builder, like his predecessor Karenba; an ally of the Burmese kings, he erected a pagoda and *kyaung* at Pagan. Near his own capital he constructed a *tazaung* with an image of the Buddha by the Kabaung stream and, on the banks of the Pabè, dedicated the Welawun *kyaung* and planted groves of toddy-palms. His friendship with the Talaing rulers led him to offend the king of Ava, who had him called to Prome and slain by the Governor in the year 1375.

His successors.

In the absence of the king from Toungoo the throne was usurped by a Talaing woman, Ma Sein, but after a few months she was turned out by the rightful heir, Pyanchi. After a reign of four years this king was murdered by his brother-in-law Sôkkade; he appears to have been a weak ruler, but his successor was hated by the people and was slain by a person called after his birth-place Paungga. He became king and made numerous religious endowments. He allied himself with the king of Ava and, while on the way to pay him a visit, he heard at Myohla that his capital had been seized by the Shan residents, whereupon he at

*NOTE.—Here and afterwards the dates given in the Toungoo Thamaing differ from the accepted chronology.

once returned and succeeded in massacring them. He died in 1397 and was followed on the throne by his son Saw U. On account of his youth and incapacity Saw U was deposed by order of the King of Ava, who put one Nemi in his place. Toungoo seems to have been dependent on Ava, and for some years was ruled by a succession of princes who were merely viceroys appointed and removed at the pleasure of the king.

Sawlu-thingar[a]

One of these, Sawluthingara, eventually managed to assert his independence and reigned over Toungoo for fifteen years, the lord of 300 elephants; in alliance with the king of Pegu he crossed the Yoma and invaded Prome. He died suddenly while hunting on the Talaing border. His daughter Uzana was deposed by the Talaing king, who reinstated Saw U, but allotted to Uzana certain villages in the south of the kingdom for her support.

Supremacy o[f] Ava.

After this the Northern kingdom seems again to have asserted its rights over Toungoo, and from 1440 to 1466 appointed governors. In 1468 one of these, Letyazalathingyan, revolted at the death of king Narapati and was invaded by the *Einshemin*. Help was sent by Shin Sawbu of Pegu, but the allied forces were defeated in a pitched battle outside the city of Toungoo and Sithu Kyawdin was imposed by Ava as ruler. This prince appears to have warred with the Governor of Yamèthin in what is now the Pyinmana subdivision and to have been overcome by him. In 1481 his son Sithu succeeded him, but was shortly afterwards deposed by the great warrior Mingyinyo.

Mingyi-nyo.

This king seems to have at first maintained his allegiance to the king of Ava, who gave him the title of Mahathirizeyathura; but before long he proclaimed his independence and built a new palace to the north of Dinnyawadi. In 1491 he founded Dwayawadi (Myogyi), near the Lawkôktaya pagoda. He entered into alliances with several kings, among whom was the ruler of Zinmè (Chiengmai). In 1502 he routed the King of Ava who, in conjunction with the Ônbaung *Sawbwa*, had invaded his dominions, apparently in consequence of a proclamation of independence. Mingyinyo's power seems to have embraced the whole Sittang basin nearly as far as Shwegyin. He established outposts at Swa, Myohla, Pyinmana, Shwemyo, Nyaunglun and Taungnyo. He received propitiatory gifts from a Shan who had set up a principality in Karenni. He joined the ruler of Prome in an attack on the king of Ava and extended his operations to the Irrawaddy basin. In 1510 he founded Ketumati, the present city of Toungoo, dug the

lake within the walls and planted orchards; but Dwayawadi seems for some time to have remained the capital.

Tabinshweti. Mingyinyo was succeeded in 1530* by his son by the daughter of the Wanwègon *myothugyi*, who grew up to be the great conqueror Tabinshweti. Aided by his general, Bayinnaung, he conquered Pegu after several attempts and established himself as king of kings by his victories over the rulers of Prome, Arakan and Ava. His exploits and those of his successors on the throne of Pegu belong to the history of Burma.

Governors of Toungoo. Toungoo ceased to be the capital and was governed by viceroys, of whom the most famous was Minyè Thihathu, the father of Bayinnaung. He built the Myasigôn pagoda and the Zetawun *kyaung*. A successor, Kyawdin, who assumed the reins of government in 1591, built the golden palace and erected the Shwesandaw pagoda. He conquered the king of Pegu and slew him. He was succeeded by his son Natshinnaung, who was captured by Philip de Brito, the Portuguese adventurer of Syriam, and carried off in the year 1611. After the fall of Philip, Toungoo submitted to the king of Ava and never regained its independence.

Subsequent history. From this time forth Toungoo loses its historical importance. It was ruled by viceroys appointed from Ava, in many cases apparently princes of the royal family. In the year 1761 King Naungdawgyi, the son of Alaungpaya, found it necessary to besiege the city, which was held against him by his uncle. Bodawpaya, the founder of Amarapura, afterwards made a similar expedition to chastise a rebellious son; and he appears also to have visited Toungoo on the way to invade Siam in 1786.

Annexation. In 1853 the district was occupied without much resistance and civil government at once came into force. Between 1856 and 1858 a good deal of trouble was caused in the Shwegyin subdivision by a Karen who announced himself as a Minlaung, collected followers, attacked Kyaukkyi and kept the country in a disturbed state. In 1858 the rebellion was finally put down, and the leader is said to have fled to Karenni and died there. In 1876 the questions arising in connection with the Eastern frontier necessitated the formation of a Karen Hills subdivision with an extra force of police under an Assistant Commissioner. Dacoities were frequently committed at this period by systematic raiders from Upper Burma in the west of the district, and by Shans from across the hills in the south-east.

* Since the finds on the site of the Shwehintha pagoda at Toungoo doubts have been thrown on this date.

At the end of 1885, shortly after the expedition to Mandalay which resulted in the annexation of Upper Burma, occurred what is called the Shwegyin rebellion. It appears that the people of Lower Burma refused to believe the news of the King's deposition and were in a somewhat excited state; but the rising, though afterwards joined by some Burmans, was originally the work of immigrant Shans, who were not supposed to have any particular affection for Burmese rule, and the cause has never been fully explained. The local authorities were unanimous in reporting that the design was known beforehand to few, if any, of the Burmese population.

The Shwegyin rebellion.

The rebellion was headed by a Shan, called the Mayangyaung *pôngyi*, in the name of the King of Burma, and its most serious effects were felt in what now forms part of the Thatôn district. On December 6th it was known that several villages to the south of Shwegyin had been burnt and that the rebels were advancing on the district headquarters. Troops were immediately sent from Toungoo to Shwegyin, and arrived in time to repulse, with loss, an attack on the morning of the 19th by several hundred insurgents. They then moved southwards, and within a few days had, in conjunction with columns from Moulmein and Pegu, gained the upper handin the disturbed country.

Kyaukkyi.

Meanwhile Kyaukkyi township had been the scene of an apparently independent rising. On December 26th the headquarters were attacked by thirty Shans with a single musket and the police-station burnt. The Myoôk fled and for a few days the township was entirely in the hands of the rebels, who proclaimed one Po Min as *Myowun*, announced the downfall of British rule and appointed rulers in the name of the king of Burma to the charge of villages northwards to the Yaukthawa stream, while they destroyed the Bawgata police-station and seized the police muskets. Troops were immediately sent from Toungoo and, on the way, had two engagements with leagued insurgents at Meikthalin and Yelè. They arrived at Kyaukkyi on December 30th and the rebels fled.

Toungoo.

At the same time there were many rumours of intended risings throughout the Toungoo district; and it was said that some *Sawbwas* from the Shan States were preparing to descend and seize Toungoo and set up an independent monarchy. The country between Kanyutkwin and Yelè was much disturbed. Troops were posted at Tantabin and Môn. At the end of January, 1886, a party of Shan

rebels were defeated east of the Sittang by the Toungoo Sitkè. On February 16th a Karen levy had a fight with Shans from Papun in the neighbourhood of Yaukthawa. The Karen Christians of the hills were actively loyal and, being supplied with muskets by Government, kept off the Shans who were wandering about the country; and eventually succeeded in capturing the originator of the rebellion, the Mayangyaung *pôngyi*, on whose head a reward of Rs. 5,000 had been placed. On April 20th the Yaukthawa guard was attacked and burnt. In May the Bônmadi Myoôk, Maung Tha Dun Aung, joined the rebels and ravaged the country with a large body of men, finally escaping into Upper Burma through the recesses of the Yoma. British troops, with the aid of Karen levies, gradually suppressed the wandering gangs of rebels and dacoits; and by July the district was quiet. The rebellion was never enthusiastically supported by the Burmese and seems to have had at no time any chance of success, being important only because of the critical time at which it occurred.

ne oun- oo re- llion.

Since that time the district has been generally peaceful, though with its full share of ordinary crime. In the hot weather of 1906 occurred what is known as the Toungoo rebellion, a misnomer, since no outbreak actually took place. A *pongyi*, named U Ôktama *alias* San Dun, conspired to attack Toungoo and make himself king. He stated that he was a son of King Mindôn, collected knives at his monastery about twelve miles west of Toungoo and tattooed his followers to make them invulnerable. His following only numbered a few dozens and, on the day fixed for the attempt, the leader and several of his followers were quietly arrested. He was transported for life and thirteen other men were sentenced to lesser terms of imprisonment.

rchæ- logy.

The sphere of the archæological survey has not yet been extended to Toungoo and none of the monuments in the district are on the list of buildings conserved by Government. When the time comes for excavations and a scientific enquiry into the historical remains of the district, important results may be expected, particularly at Dinnyawadi, which was long the seat of the Toungoo kingdom. Here the ruins, moats, and elaborate fortifications of three cities are still clearly visible, as well as the ancient Sigôn and Ngaleinda pagodas, one of which is partly made of grey sandstone, a rock which is said not to exist in the neighbourhood, carefully chiselled into blocks like bricks with rounded edges. A foretaste of what may be expected in the way of archæological discoveries was given in

1911, when, on the site of the Shwehintha pagoda on the west of the city of Toungoo, some memorials were brought to light which are believed to refer to the foundation of the city by Mingyinyo; the attribution, however, has been disputed.

The distinguished scholar Dr. Forchammer made a long list of ancient buildings in the neighbourhood of Toungoo, with the dates locally assigned for their foundation, which probably have little value, there being no genuine ancient inscriptions as far as is at present known. The most important of these are—

(1) The Shwesandaw pagoda, in Toungoo town near the eastern bank of the lake, said to have been founded in the year 1550 by Thihathu.

(2) The Myasigôn pagoda, near the railway-station, said to have been founded in 1538 by Minyè Theingathu, governor of Toungoo under the great conqueror Tabinshweti, who also built the Zetawun *kyaung*.

(3) The Lawkôktaya pagoda, at Myogyi, the old city of Dwayawadi, near the west bank of the Sittang, said to have been founded in 1173 by Narapadisithu, king of Pagan.

(4) The Shinbin Kyauksauk pagoda, in the western hills near Tabetkwe (Ôktwin township), which was traditionally founded by Asoka, and repaired by Narapadisithu and again by Karenba.

(5) The Myatsawnyinaung, across the Sittang from Toungoo, another very ancient pagoda.

At Kyaungbya in the Kyaukkyi township are the remains of buildings which are commonly attributed to Philip de Brito, the Portuguese.

CHAPTER III.

THE PEOPLE.

The population at the last five enumerations was:— Population.

1872	...	...	...	136,816
1881	...	...	...	190,385
1891	...	...		211,784
1901	...	...	...	279,315
1911	...	...	...	351,076

The greater part of the increase between 1891 and 1901 is due to the incorporation in 1895 of the Shwegyin and Kyaukkyi townships, up to that date part of the Shwegyin

district; the difference between the figures for 1901 and 1911 is a true increase, largely accounted for by immigration from Upper Burma and the extensive taking up of cultivable wastes in the Sittang plain. Immigration was during this decade principally from the two dry zone districts of Meiktila and Yamèthin, whence the uncertainty of the seasons has driven many cultivators to seek regions of more constant rainfall. The birthplace enquiries at the census of 1911 show that Toungoo contains more natives of those two districts than of the whole of the rest of Upper Burma, including the Shan States; and the corresponding figures for 1901 show that this preponderance is subsequent in date to the enumeration of that year. The number of females is scarcely less than the number of males, which shows that the influx is a genuine migration of families likely to be permanent settlers and is not accounted for by the seasonal flow from north to south of agricultural labourers, who had in fact mostly left the district again at the period of the enumeration.

nsity lopu- on.

The following table shows the density of population at the census of 1911, arranged by townships. Owing to numerous changes of boundaries, no useful comparison can be made with the figures of previous enumerations :—

Township.	Area in square miles.	Population 1911.	Per square mile.
Yedashè	853	49,550	58
Leiktho	794	18,050	23
Toungoo	270	53,032	196
Tantabin	889	41,568	47
Ôktwin	924	49,753	54
Pyu	773	70,300	91
Kyaukkyi ...	1,048	40,447	39
Shwegyin	621	28,376	46

The density of population for the whole district increased from 45 per square mile in 1901 to 57 per square mile in 1911, during which period the exterior boundaries remained unchanged. As every township contains a considerable

area of sparsely-inhabited hill-country, the township figures do not indicate the actual density in the cultivated plain; in view, however, of the fact that most of the best waste land has now been occupied, no considerable wave of immigration is likely to recur, such as marked the decade 1901—11, and the future growth of numbers will be gradual and natural. The population of the district is contained in two towns (Toungoo and Shwegyin) and 725 village-tracts. The average number of persons per house at the 1911 census was 4·58, the provincial average being 4·91.

Ethnology:—Population by races.

The following table shows the comparative figures for different races in 1901 and 1911:—

—	1901.	1911.
Burmese	180,373	228,842
Karens	66,447	74,411
Shans	15,775	16,864
Races of Western Asia, including India.	10,103	20,228
Taungthus	2,077	6,108
Chinese	1,182	2,500
Zerbadis	580	769
Talaings	600	507
European races	138	334
Anglo-Indians	267	271

The doubling of the European and Chinese population within ten years indicates commercial progress consequent on the opening up of the country. The Indian population has also doubled, largely in consequence of immigration to the Dumraon grant lands near Zeyawadi, which are farmed by Indian tenants; elsewhere in the district the Indian is generally engaged in trade and coolie work, though a few have taken to cultivation near the railway and at Shwegyin there is a colony of Chittagonian fruit-growers. The Talaings as a distinct race have sunk into insignificance and most even of those who are recorded as Talaings commonly speak Burmese, but there is probably a good deal of Talaing

blood in the veins of the Burman in the southern part of the district.

hans.

The Shans have nearly all entered the district from the Shan States within living memory, but the movement appears to have ceased of late years, no doubt by reason of the increased security of life and property in those regions since they have come under British administration. At Zawti, near Shwegyin, there are some Shans from the Bhamo district. Only 75 per cent. of the Shans in the district employ the racial language. At the time of the annexation of Upper Burma these people were temporarily a serious menace to law and order in the eastern part of the district (*see* Chapter II, History) but nowadays they are quite peaceful and give no trouble, dwelling principally in the south of the Toungoo (Myoma) township and the north of the Ôktwin township. They are a prosperous community and the standard of living is somewhat higher among Shan cultivators than among Burmans.

'aung-hus.

The Taungthus are now considered to be a branch of the Pwo-Karens, though they are vulgarly often called Shans. The Provincial census figures show that they are fully maintaining their distinct existence and language and are not being absorbed by other peoples. The great increase in the district figures is due principally to immigration from the Thatôn district. About the year 1902 a number of cultivators, whose lands had been eroded by the sea, migrated with all their possessions and a *pôngyi*, and founded the villages of Zayatkyi and Kinmungyôn in Tantabin township, which have grown rapidly and were said in 1912 to contain 1,818 Taungthus, besides a number of Shans, Talaings and Karens. The lands cleared and cultivated by this colony are at present extraordinarily fertile and the people are among the most prosperous in the district.

'abeins.

The Yabeins, who forty years ago numbered several thousands and lived by rearing silkworms on the slopes of the Pegu Yoma, do not appear in the enumerations of 1901 and 1911 and seem to have been absorbed in the Burmese population, though they still exist as a distinct but diminishing body in the Pegu and Hanthawaddy districts. They are described by Major McMahon, Deputy Commissioner of Toungoo in 1867, as speaking Burmese with a few peculiarities of pronunciation, but being (except for their mulberry-cultivation) as ignorant of useful arts as the Karens. It is generally held that they are of Burmese stock. The Sub-divisional Officer, Toungoo, states that they still exist in a few villages on the western border but, with the disappearance

of their special mode of industry, are being merged in the Burmese population, with whom they intermarry freely, being no longer looked on as outcasts.

Karens.

It was for many years the policy of Government, in order to diminish the destruction of forests by the practice of *taungya*-cutting and bring the influences of civilization to bear on the Karen people, to encourage them to settle to regular cultivation in the plains. In the year 1883 numerous advances of money were made for the purchase of cattle and implements and for many years afterwards extensive areas of culturable waste land were reserved for Karens. This policy has been successful and they have descended into the plains in large numbers during the last generation. They show, however, no tendency to coagulate with their neighbours; 98 per cent. of them still ordinarily use the Karen language; and, as their education is largely Christian and the policy of the missionaries * has generally been to foster a spirit of nationalism among them, it cannot be anticipated that their progress in civilization will ever result in fusion with the Burmese. They are found all over the district, but are most numerous on the east of the Sittang and particularly in the Kyaukkyi township. They have also a number of settlements among the foothills of the Pegu Yoma.

Karen ethnology.

There is no authoritative modern work on Karen ethnology, but the tribes inhabiting the Toungoo district can be roughly classified according to the three main divisions of the race recognized by Mr. Lowis in the Census Report of 1901, as follows:—

Bghai ...	Gaikho, Karenni, Padaung.
Sgau ...	Sgau, Paku, Mawnipwa.
Pwo ...	Mopwa.

* In the early days of missionary enterprise among Karens it was widely believed, on the ground of some tribal traditions and the coincidence of certain legends with the Pentateuch, that the Karens had, in their original home in Tibet, been taught by Jews of the dispersion before the Christian era, or by Nestorian missionaries a few centuries later. This belief, together with their remarkable docility, called forth the sympathy and enthusiasm of their Christian teachers, who have naturally encouraged them to look upon themselves as a race set apart.

Neither the tribes nor the dialects were enumerated separately at the census, but the Sgau is no doubt the dominant form of speech. Among tribal customs of the hill-Karens are specially noticed the belief in divination by chicken-bones and the habit of wearing tunics of special patterns varying according to tribe, which is common to the Karen race, and led Sir George Scott to speak of an account of the tribes as " of the nature of a history of tartans. "

lotes on aren ibes.

The following notes on Karen tribes describe in the present tense dresses and usages which originally distinguished one from another, but which have to a great extent disappeared already under the influence of the missionaries and of direct British administration and in time will no doubt fade away entirely.

aikho.

The Gaikho or Gekho inhabit the north-east corner of the district on the road to the Shan States. They consider themselves the most important tribe and allege that, by presenting a white elephant to one of the Burmese kings, they obtained a grant of all the Toungoo hills and that the other tribes purchased their lands from them. Dress—men: embroidered short tunics; women: jackets of which the lower half is red silk and the upper part white with the sun's rays or spiders'-webs embroidered, and black skirts with a broad red stripe down the middle; leaden rings round the neck. Marriage-feasts celebrated with the slaughter of pigs, buffaloes and bullocks. Burial in solid wooden coffins, which are kept ready in advance by old people. Funerals solemnized with a feast of pork, buffalo-meat and "*kaung.*" Children named after grandparents or important events. The people have a great fear of elephants.

arenni.

The Karenni also live in the north-east of the district, on both sides of the border. Dress—men: short dark-coloured tunics and sleeveless Shan jackets; women: dark cloth on the head, piece of cloth tied under one armpit and over the other shoulder, skirt down to the knees decorated with beads and silver coins; heavy necklaces of beads and coins, and bunches of beads round the ankles and below the knees. Funerals celebrated with a great feast and dancing of unmarried men and women. On the death of a chief, the body is buried secretly and, about six months later, some of his clothes are formally interred in a decorated coffin, together with a live slave and pony. The people are said to be thievish in disposition.

adaung.

The Padaung are also in the north-east of the district, working terraced paddy-fields on the hillsides and using manure. They are the hardest working of all the tribes,

great bee-keepers, and have much reverence and obedience for their elders. Dress—men: Shan waistcoats and short tunics or breeches; women: jackets white above and red below, black skirts with red in the middle; the hair plaited on the top of the head, with silver hairpins; thick spirals of brass round the neck, forearm, and legs. Rice and water are poured on the bride when she reaches the bridegroom's house, to bring luck. A dead body is exposed to view for several days in a dug-out coffin and visited by unmarried men and women, who stand alternately in a ring round the coffin holding hands. After burial a little house is erected over the grave containing grain and fruit for the consumption of the deceased. Children are named after their grandparents or after important events.

The Bwe (or Bghai) are a large tribe living to the east of Toungoo and supporting themselves by paddy cultivation and hunting. Dress—men: short tunics; women: black sleeveless jackets trimmed all over with beads and black skirts with white stripes across the middle. The dead are buried in a coffin dug out of a single tree, with a small pot of half-cooked rice. Many families reside in a single building, with a corridor down the middle, entered from below by a trapdoor, with a bamboo fence outside and pigsties below the house. In cases of theft, which is reckoned one of the gravest offences, the ordeal by water is used, the complainant and accused trying which can stay under water longer; there is also an ordeal by climbing a slippery tree stripped of its bark. Murderers are considered to be accursed and the family of the victim has a right to avenge his death. An avenger conceals his purpose, minces and salts part of a pig's entrails and sends an agent to drop the stuff in the food of the enemy to make him lose his self-possession and fall an easy prey. In cases of a blood-feud raid, the adversaries are mutilated and butchered and infants murdered. In raids to recover debts, the captives are sold into slavery. Peace is ratified in the following manner: a dog is slaughtered, and a mixture made of its blood; filings from a sword, a spear, a musket-barrel and a stone; pig's-blood, fowl's-blood and water, which is then drunk by the two leaders with imprecations, while half the dog's skull is hung by a string round the neck of each. Bwe.

The Paku live in the hills to the south-east of Toungoo and their tradition is that they immigrated from a country further north. They subsist by shifting cultivation of jungle-clearings, which lie fallow for ten or fifteen years and then are worked again; and they also grow oranges, citrons and limes. Paku.

Spirits are worshipped in a sacred grove of bamboo. Dress—men: a long gown to the knees and short trousers; women: a short black gown and black skirt, with necklaces of silver coins and beads. Each village-clan embroiders its dress in a particular manner. A stranger entering the house of a woman who is confined has to pay a penalty. Corpses are exposed to public view for several days and then burnt, after a feast, and the ashes buried.

Mawnipwa.

The Mawnipwa live in the south of the Tantabin township, immediately north of the Yaukthawa stream which divides Tantabin from Kyaukkyi. They are the wealthiest of the tribes, grow the betel-nut palm extensively and are said to resemble the Paku in habits though not in speech.

Mopwa.

The Mopwa live east of Toungoo between the Kanni and Thaukyegat streams. Dress—men: long gown with red and white stripes and trousers; women: home-made head-dress, long black jacket with embroidered edges, embroidered black skirt. They are said to be particularly strict moralists in sexual matters, transgressors being whipped naked with thorns by moonlight.

The Yado valley.

The following account of the inhabitants of the Yado valley (Padaung, Bre, Yinbaw and Karenni) gives an interesting picture of these people at the time when they first came in contact with Government officers. It is extracted from a report made in 1884 by Captain T. M. Jenkins, Assistant Commissioner, Karen Hill Tracts, who visited the valley in consequence of disputes involving villages across the frontier:—

"The men in appearance are all alike, but there is a great difference in the women, particularly the Padaungs and the Yinbaws. The Padaung women are very striking at the first view on account of the immense coils of brass tubing wound round and round their necks, which give them an ugly appearance; the object evidently being to give them long necks, as in some cases I saw women's necks at least 6 inches long. They also have coils of tubing round the legs. The hair is tied up in a small knot on the top of the head with a red string or cord, the ear-rings being of brass or silver. Round their waists they have a dark blue cloth, tied clumsily in a knot in front, tucked in on one side and reaching to the knees or a little lower; and over their shoulders they have a cloth (like a blanket with a hole cut in it, through which they pass their heads) with no sleeves, which reaches to half way down their knees, perhaps not so low. The Padaung women are very untidy in their dress, but they work pretty hard and do the wood-cutting and

water-carrying. The Yinbaw women are quite a different class of women, are tall, well-shaped and have fine arms, small hands and small waists; but are very short from the knee down and have enormously large calves ending in thick ankles and small feet. These women take a pride in their dress and appearance; they have a dark blue cloth thrown over the head, tied back behind the ears and hanging down the back; a plain black cloth is brought round under the left arm and the two corners tied with a cord over the right shoulder: this cloth hangs down straight in front and behind to within 4 inches of the knee. Another cloth with a coloured pattern of red or white worked in it, reaching down to about 3 inches above the knee, is tied round the waist. Round this and round the waist they tie several strings of white or red beads as tight as they can to make their waist small and then they tie other strings of beads, generally white beads, a little looser round the waist and hips, so as to hang down in a festoon on the outside of the thigh; they then tie some more strings of beads as a belt round the waist so as to keep close to the body the cloth that is hung over the shoulder. Besides all these beads they wear as many bead necklaces as they possibly can get. The most striking part of the dress is the enormously large silver earrings, in appearance like the eyebolt of a sail; and also the mass of white and red beads tied round the leg below the knee and above the calf; and round the ankle there are two strings of beads: these beads are glass beads and I think they are all brought from Rangoon. The effect of having so many beads round the leg just below the knee prevents the wearer from squatting down on her hams as is done by most Asiatics, so the women have to stoop when weeding, etc., instead of squatting; they seldom sit down and when they do it is generally on a form or a raised place with the legs stretched straight out in front of them. The men and women are much darker in colour, that is, much redder, more of a copper colour, than the Karens (Karen Byus) of the hills. The men are fine, tall well made, very active, full of fun and always ready for a fight or a scrimmage; they wear a red or dark yellow cloth round the head, rather tight-fitting trousers to within a few inches of the knee, black twisted strings, like hairs of an elephant's tail, round the leg above the calf, and are armed with a Shan musket, or a couple of spears, a dagger, and very often a *dhalwè* or surrudda. Every man carries a "saung" or coverlet, and a bag with two or three days' provisions, so as never to be taken unawares."

Karens in the plains.

Even those Karens who are settled in the plains still retain to a large extent the national dress, woven at home from imported yarns, a much more durable material than the cheap Manchester piece-goods worn universally by the Burmese. The enquiries into the cost of living conducted during the settlement operations of 1911—13 show that they spend more than any other race in the district. The difference is not very large and their standard of living is not conspicuously higher than that of the Burmese, but they eat more rice, frequently taking three full meals a day, and spend more on clothing and festivals. They also indulge largely in imported provisions, biscuits, sardines and fruit. Though secretive and suspicious of strangers, they are generally quiet and law-abiding. On the other hand, they are distinctly less civilised and less cleanly in their habits than the Burmans and in the hills are much addicted to the consumption of *kaung* and (the Burmans say) to the practice of witchcraft.

Burmans.

From the table in the third paragraph of this chapter it will be seen that the Burmese race largely preponderates, forming 65 per cent. of the district population. In the cultivated plain this proportion is larger still. Many of them are immigrants from Meiktila, Yamèthin, Shwebo or Pegu. Upper Burmans take some time to fuse with the natives of the district, and in some villages there is a distinct antagonism between the two classes. The Burmans are on the whole prosperous, living to a great extent in wooden houses with a good deal of solid furniture, and are able to spend considerable sums on luxuries. The indebtedness among agriculturists is not particularly heavy but if the rapid extension of cultivation has not produced widespread financial ruin, such as came about in some of the canal-tracts of Upper Burma, this must be attributed rather to the secure rainfall and the productivity of the soil than to self-restraint and economy, virtues which are rare among the Burman cultivators in any district.

Christian Missions: the American Baptist Mission.

The pioneers of Christian Mission-work in the district were the American Baptists. In September 1853, the year after annexation, the Revd. E. N. Harris came from Moulmein to Shwegyin and started work among the Karens. In the course of the first year nearly 600 converts were made, but progress has since been less rapid. In 1898 work was commenced at Kyaukkyi. The mission at present includes part of the Pegu and Salween districts as well as the Shwegyin subdivision and has 78 churches and 40 schools. Work at Toungoo was commenced in 1853 independently

by the Revd. F. Mason, who came from Tavoy in October of that year. Operations were at first confined to the Karens, but in 1861 were extended to the Shans, a large number of whom had immigrated about that time from the Shan States, and the Burmans. In 1867 the Revd. J. N. Cushing was appointed, well known as the translator of the Bible into the Shan language. Work was pushed on over the border into Karenni and in 1900 a station was opened at Loikaw. There are at present three agencies of the Toungoo Mission, the Paku, Bwe and Burman Missions with 167 churches and 89 schools. Neither the Shwegyin nor the Toungoo Mission confines its work within the borders of Toungoo, so that exact figures for the district cannot be obtained, but at the 1911 census 18,516 persons of native race in the district were returned as Baptists.

Roman Catholic Mission.

After the Baptists, the Roman Church was next in the field. In 1867 four missionaries arrived at Toungoo and in the following year work among the Karens in the hills was started by the establishment of a station at Leiktho. Work was extended into Karenni and the Shan States; and in 1890 a Bishop was consecrated (the Vicar Apostolic of Eastern Burma), whose diocese includes the northern part of the Toungoo district and whose headquarters is at Leiktho. There are at present 6 churches, 164 chapels and 28 schools, including several convents and orphanages. Work in the Shwegyin subdivision was started about 1892. Though there are about 60 Catholics scattered about the Kyaukkyi township, the work has been most successful in the neighbourhood of Shwegyin. In 1902 a station was established at Hngetpyadaw near Kunzeik, in the extreme south of the subdivision, which has since been abandoned owing to malaria. The mission headquarters are at Nyaunglèbin in the Pegu district. Practically nothing has been done in the Pyu subdivision. This mission falls within the diocese of the Vicar Apostolic of Southern Burma. The Native Roman Catholic population of Toungoo district is given in the census returns of 1911 as 9,940.

Church of England.

The work of the Society for the Propagation of the Gospel in Toungoo commenced in 1875. After a time it was found convenient to create two separate spheres of work, St. Luke's Mission working mainly in the north-east of the district among Bwe-speaking tribes of Karens and St. Peter's Mission working among the tribes speaking Paku and Sgau in the eastern and western hills south of Toungoo. In the earlier years of the twentieth century considerable development was expected in the Southern mission from

the organizing ability of Thomas Pellako, but after a time he left the church to found a sect of his own, and his secession drew away a number of converts. The missionary staff in Toungoo has fallen from five in 1906 to two in 1913. The policy of the mission is to educate the people by graduated schools in the villages and at headquarters, the dissemination of literature, including a monthly newspaper, and pastoral work; and to train native clergy and teachers so as to enable the Karen church to be eventually self-governing, self-supporting and independent of European guidance. With these objects, native agency is employed wherever possible; the religious control of each village is entrusted to a committee consisting of a catechist and several elders appointed by the village, the villages being grouped into districts each under the charge of a priest or deacon; an annual conference held, which in time will be developed into a representative Council of delegates from the villages; and an endowment fund is being raised, whose growth will automatically reduce the foreign contributions. The mission maintains a printing press. There are 51 churches and 23 schools, and the Mission has a staff of 7 deacons and 54 catechists. The census returns of 1911 give the native Anglican population of Toungoo as 4,043.

Methodists.

There is a Methodist Mission at Thandaung with 34 native converts (1911).

CHAPTER IV.

AGRICULTURE AND IRRIGATION.

Cultivated area.

The total area of land in the district occupied for cultivation in the year 1912-13 was 709·35 square miles or 11½ per cent. of the gross area of the district, an increase of 63 per cent. on the area occupied eleven years before. The expansion has been most remarkable in the Tantabin township, where the area has almost trebled. In Kyaukkyi, Pyu and Shwegyin also there has been rapid growth. The development has been due to the extent and quality of the available waste lands, which attracted immigrants and induced people engaged in other occupations to abandon them for agriculture. The amount of profitably culturable land which now remains unoccupied is naturally not large. The only exceptions to this statement are the extensive flooded lands in the southern part of the district which, by

the expenditure of large sums on embanking the Sittang, might possibly be brought under cultivation without compensating damage to other lands now free from floods; and the lands at the base of the hills in the east of the district which may prove to be suitable for extensive rubber-growing.

The hills. The most valuable crop grown in the hills is betel-nut. The gardens are irrigated from mountain-streams and the produce exported both into the plain and over the watershed into the Shan States and Karenni. The betel-vine is also grown to a considerable extent and the district supply of the leaf comes principally by the hand of pedlars who go up into the hills and carry it down in baskets. Oranges and sweet limes are also commonly grown and sent down to the markets on the railway and the river. The other cultivation is of the ordinary *taungya* type, rice being grown to an extent hardly sufficient to supply the needs of the inhabitants, as well as a certain amount of sessamum and a good deal of tobacco of a better quality than that produced in the plains. In the more remote tracts failures of the rice crop occasionally produce local distress, but the people are generally fairly prosperous.

The plains :—Soils. Of the total occupied area more than nine-tenths fall in the Sittang plain and it is this region which produces the great bulk of the wealth of the district. The soils are very diverse in physical character and in fertility. The foothills have everywhere stony and sandy soils; near the banks of the river and large tributaries, as well as in many irrigated areas, the surface-soil is rich in silt; and, between these two extremes, all varieties of soil are found, from sandy *indaing* to an extremely stiff clay. West of the Sittang, from some distance south of Yedashe to Ôktwin, very little really good land is met with. In parts of this region the soil is a grey-coloured *indaing*, in other places a yellow sand underlying a thin surface of inferior loam and in others an intractable yellow clay. There is another area of poor soil in the Kyaukkyi township. Immediately below the hills the soil is granite detritus and in the remainder of the plain in this township, except a strip along the river about a mile in width on which silt is annually deposited, the characteristic soil is a stiff clay, difficult to labour and seldom producing a heavy crop. The best soils are found in the Pyu and Tantabin townships and in parts of the Yedashe township. In Pyu, owing to the even slope of the plain from the base of the hills down towards the Sittang, silt is carried by the drainage and deposited over the soil. The fertility of the land in Tantabin

is ascribed to the Sittang which, according to tradition, had its course some centuries ago close to the base of the hills and enriched with its overflow areas far distant from the present course of the stream. In Yedashe the proximity of the hills and the amount of the silt brought down by the irrigation streams have produced very fertile basins, though on the higher lands surrounding them the soil is poor.

Deterioration of soil. Many of the regions of the oldest cultivation, where the soil is not renewed by an annual deposit of silt, show very poor outturns ; and it is a common opinion among the cultivators, who use no means other than irrigation and occasional manure to improve the soil, that continued cultivation diminishes fertility. It cannot be said, however, that the statistics of crop measurement at successive settlements bear this out, except in the case of lands naturally poor which, when first cleared and worked, give good crops but become rapidly exhausted.

Climatic conditions. Except where crops are liable to complete destruction by floods, there is no part of the cultivated plain in which total failure from the caprice of the climate need be feared. The aggregate annual rainfall is always sufficient to produce a crop of rice. But it does not always fall in sufficient quantity at the times when it is most needed, and in the centre and north of the district fallowing or short crops, due to inadequate rain during the ploughing season or when the ear is filling or at both these times, are of frequent occurrence. The loss from defect of water-supply is not, however, so serious as that caused by its excess. Floods usually occur in August and September, and it is not uncommon for large areas in the south and east of the district to be left almost entirely devoid of crops owing to the destruction they occasion. Sometimes the damage is repaired by replanting but in that case the crop is nearly always too late to be a full one. Climatic conditions are most favourable for rice in the south-west of the Sittang plain, where the rainfall is more plentiful than in the north while not excessive as in the south-east. On the whole, good seasons are more numerous than bad and cultivation is not attended by such grave risks as in drier climates.

Fallows and failures. On the average of the period 1901—13 about seven per cent. of the occupied area was left fallow. The causes of fallowing are poverty of soil, which is most frequently operative in the Toungoo and the north of the Ôktwin township; deficient water-supply at the times of ploughing and sowing, to which all lands on high levels in the north of the district are subject; and flooding at the time of sowing,

which is a common cause along the Sittang generally. Crop failures average about 2 per cent. of the occupied area for the same period; but the range of variation is much larger than in the case of fallowing and in a year of heavy floods, such as 1911-12, the crop fails to mature over very large areas.

Irrigation.

There are no irrigation-works maintained by Government, but those constructed and kept up by individuals are numerous and increasing, especially in the northern part of the district. The object of the work is twofold: to ensure a regular supply of water and to benefit the soil by the deposit of silt. The characteristic method of irrigation is by an earthen bund in a small stream, either maintained permanently or erected at times of year when water is required, which directs the flow over the fields, immediately or through a short canal. In the Yedashe township the most useful source of irrigation is the Samo stream, which flows from the south-west and crosses the railway a little to the north of Yedashe town. Trouble has been caused by changes in its course, the silting up of the bed and occasional breaches in the banks. North of Swa use is made of a number of small hill-streams, of which the Daunglangya is, perhaps, the most important. In the Toungoo township irrigation is obtained from a network of streams descending towards the south-east from the hills; the chief of these are the Môndaing, Chaungbyu and Pabè. East of the Sittang the Pathi stream, which is perennial, provides water for the cultivation of spring rice as well as of the main crop. In the Ôktwin township the main sources are the north and south Bôn streams, the Yetho, Yet, Minye and Kywèmathe. In the Yet stream, some distance west of Chingôn village, there is a brick weir which was erected about 1898 by a Chinaman. It delivers water to lands north-east of it by means of two canals and would be a valuable work if kept in proper repair. In Tantabin township the irrigated area is confined to a few acres watered by small streams from the hills on the north and east, of which the Maudaing is the chief; and in the Pyu township there is hardly any irrigation. In the east of the Kyaukkyi township betel-nut gardens are watered by means of canals dug from the Môn, Pada and Shangyaung and there are a few rivulets utilised for growing rice on the land sloping down from the hills. A good many of the irrigation-works in the district have been recently constructed and it is probable that the resort to artificial water-supply is increasing, though some also have been abandoned, generally because of the failure of the cultivators to

combine in order to keep them up. There was at one time a bund erected in the Pabè stream which provided a water-supply rich in silt for a number of *kwins* of poor soil in the Toungoo township. It was washed away and has not been re-erected, though a substantial work could be made at a cost which would be soon defrayed by the increased profits from the land. None of the existing irrigation works are of large size or of costly construction. Originally made by hired Indian labour, they are kept up by customary arrangements varying from place to place. Sometimes the headman or one of the principal cultivators is recognized as manager of the work and collects labour for necessary repairs; but as a rule these are done by such of the cultivators as are sufficiently energetic and it is a common complaint that many of those benefiting by a work refuse to spend either money or labour on it. There is seldom any definite arrangement regarding the distribution of water, which is allowed to run naturally from field to field. The provisions of the Burma Canal Act have not been applied to any work in the district.

Protective works. The only protective work constructed by Government is a small embankment stopping a breach in the east bank of the Sittang between the villages of Meikthalin and Luat, which was made in 1911 at the cost of the District Cess Fund. It has proved very useful in preventing the flooding of a large area in the centre of the Kyaukkyi township. The embanked road between Tantabin and Natywa protects the north-west of the Tantabin township from overflow from the marshes at the headwaters of the Bônmadi stream. In areas subject to floods the cultivators have erected a multitude of protective works. These are either solitary embankments round holdings made at the cost of the owners, or continuous embankments along the Sittang or its tributaries put up by the cultivators jointly. In the eastern part of the Pyu township and in the Kyaukkyi township works of this description are exceedingly numerous, and the aggregate cost of their construction must have been large. They range in size from slightly enlarged field-*kazins* to substantial bunds 6 or 8 feet in height. When a continuous bund is made, the usual custom is for each cultivator to pay the cost of the section adjacent to his land, and to keep that section in repair. The utility of a holding-embankment is confined to the individual and it often causes damage by preventing the flow of the water from the holding next above it. This is in contravention of the custom which allows cultivators to relieve their

holdings from flooding by cutting the boundary-*kazin*, but it seems to be acquiesced in. None even of the largest embankments in the district are sufficiently continuous or substantial to protect any considerable area permanently from floods. All are liable to frequent breaches, due to high floods or the gradual erosion of river-banks, and their upkeep gives considerable trouble.

Crops: Rice.

Nearly nineteen-twentieths of the cropped area in the plain is under rice, which is usually grown as the sole crop of the year, only a few acres giving a second crop of maize, tobacco or melons. Practically the whole is winter rice. The varieties are very numerous. Short-lived sorts include *ngasein*, *letywezin*, *ngayabo*, *hle*, *zalè*, *kunwz*, *ngakyauk*, *ngakyima*, *bangauk*, *ngamokseik*, and *kauksanyi*. The long-lived kinds, which are grown over a much smaller area, are chiefly *midon*, *milat*, *taunggyi*, *dalisan*, *taungdeikpan*, *byat*, *londat*, *thidat*, *kaukpyu* and *kalagyi*. This class is grown mostly for home consumption and the grain does not find its way to the railway for export in any great quantity. Where the supply of water is excessive, several flood-resisting varieties are grown, the most common names applied to them being *yemanaing*, *kala-saba*, *tadaungbo*, and *yenwè*. There are numerous kinds of *kaukhnyin* or glutinous rice. The short-lived sorts of rice are grown more than formerly, *ngasein* which was first introduced not many years back being perhaps the most common. It is alleged that the yield is heavier than that of the longer-lived kinds and the plants more independent of the late rains; also the brokers buying for the Rangoon market give only a slightly better price for the better grain. The flood-resisting varieties fetch a low price and are not liked for home consumption, but they could with great advantage be much more widely grown than they are if the Karens in the Kyaukkyi township could bring themselves to sacrifice the hope of a crop of *kaukkyi* to the certainty of a crop of *tadaungbo*.

Minor crops.

Maize is grown to a small extent in the early rains in patches where there is good soil and the water does not lie, but it is apt to be damaged by too heavy showers. It is also grown to a small extent as a cold-weather crop. The broad white bean (*pègyi*) is grown a good deal as a dry-weather crop on silt by the banks of streams, but with this as with other dry crops the delay in planting caused by the late subsidence of the floods often damages the outturn. Sessamum is nearly all of the *boktaung* variety, grown at the end of the rains in temporary clearings in tree or

elephant-grass jungle. The oil produced is not nearly sufficient for local consumption. Sugarcane, mostly yellow cane, is planted on the rich soil along the banks of the Sittang, on elevated plots among rice-land, and as a *taungya* crop in jungle-clearings. If grown in a well-drained spot, it does not seem to be injured by a large rainfall. Tobacco is cultivated widely in the Shwegyin subdivision and in isolated plots of alluvial land elsewhere. It rapidly exhausts the soil, and cannot be grown continuously except where the fertility is annually renewed by silt. There are growing rubber plantations in Shwegyin and a few experimental plots in the Pyu township. Rubber suffers from the long spell of dry weather between November and May and tapping has to be discontinued during the hottest months. Considerable grants of land have been made in the foothills for the growing of cotton, but it remains to be seen whether it will prove a success.

Fruit-growing.

The area under plantains is considerable, but a great part of it is made up by house-compounds containing only a few trees. The varieties most grown are *yakaing* and *pigyan*; the better sorts, *thihmwe* and *wetmalut*, are uncommon. Plantain-gardens deteriorate after a few years, and many of the old ones are kept up more for the thatch-grass they produce than for the fruit. Orange-gardens are few; in mixed gardens the commonest trees are mangoes, cocoanuts and jack-fruit trees, with a few guavas, custard-apples, limes and marians. The cultivation of the *danyin*, whose fruit sells for Rs. 5 a basket, is spreading in the Shwegyin subdivision, where also a tree—the cashew nut—known as the "*Thiho thayte*", is grown by Indian settlers. The most valuable gardens are those grown with the areca or betel-nut palm. The nuts are graded according to the degree of maturity at the time of picking, and the price ranges from 8 annas to Rs. 2 per viss. The sheaths of the palm-branch are also much esteemed as cheroot-wrappers and the price runs up to over Rs. 2 per viss.

Crop-pests.

The rice crop does not suffer severely from disease or insect-pests. In parts of the Tantabin township some damage is caused by an insect which takes up its abode at a joint in the stalk, causing the ear to become white and preventing the formation of grain. Rats are very common in the Pyu township, especially close to the western hills; they cause damage both by eating the grain and by perforating the field embankments with their holes. Wild elephants do a great deal of destruction between the hills and the railway in the southern part of the district. Pig

and deer are common east of the Sittang and eat all sorts of green crops, especially beans and sugarcane. Beans are also liable to damage by hairy caterpillars and green flies. The yield of oranges and other fruit trees is much decreased by a parasitic shrub which grows on the branches.

Method of cultivation :- Rice.

The use of the plough as a preliminary to harrowing is now very general, and it is not uncommon to find the *setton* or rotary cultivator employed in places where there is a heavy growth of grass. The number of harrowings varies from five to twelve according to the water-supply and the nature of the soil. After harrowing, the surface of the field is usually smoothed before planting. Broadcasting is very extensively practised. In flooded places it is done because transplanted crops would not, at the time when the floods come, be high enough above ground to survive. In other places the reason given is that the extra yield due to transplanting is not sufficient to pay for the cost of the operation. This occurs on low-lying lands, where the water-supply is sufficient to admit of early sowing, and on high and poor soils, where the yield is small in any case. On good soil of medium elevation the crop is usually transplanted, though broadcasting by the more careless cultivators is not by any means uncommon. Karens are more addicted to broadcasting than either Shans or Burmans, and as a result obtain smaller crops from similar land. Transplanting with seedlings obtained from nurseries sown a month to six weeks previously or by thinning broadcasted fields is generally completed by the beginning of September. Except where his fields are close to the village, the cultivator lives in a hut on his holding from July to February. Reaping is finished about the 10th of January. The grain is trodden out on threshing-floors by cattle in the usual way. Winnowing is a very perfunctory operation. Trayfuls of the grain are thrown in the air, while two or three persons stand around and fan it as it falls on the heap. In the case of flood-resisting varieties the ploughing is begun very early in the season and is in some places done at night before the break of the rains. The crop is always broadcasted and it is reaped some time before the main crop.

Sessamum.

Sessamum is grown in a somewhat peculiar manner in elephant-grass jungle. The grass is cut down before the floods come and allowed to rot to the end of the rains, when the sessamum is immediately sown, the ground not being ploughed. The remaining operations consist of cutting down the grass as it threatens to overtop the plants; but it grows so quickly that when the time for reaping

comes it is often difficult to see that there is any crop on the ground.

Sugarcane. For growing sugarcane, seedlings are obtained by cutting old canes into lengths of five inches or so, which are placed in nurseries in September in order that they may sprout. At the end of November they are planted out, two at a time, in holes 18 inches from each other, made in drills about 27 inches apart. The drills are made with the plough in land reduced to a fine tilth by two or three ploughings, harrowings and smoothings. Twenty days after the planting the earth between the drills is levelled over the seedlings. In March weeds are removed with a hoe and the earth heaped round the growing plants; and in the early rains drainage-channels are dug between the rows. When the plants are about 6 feet high the withered leaves are removed. The canes are cut in January, so that the crop is fourteen months on the ground. Between the cutting and the following November the land is left fallow, or occasionally maize is grown. Sometimes the canes are sold, but more often they are crushed and the juice boiled and converted into balls or flat cakes of jaggery. When sugarcane is grown as a *taungya*-crop, the jungle is cut down and burnt in the dry weather and maize and pumpkins are grown in the early rains. Two successive crops of cane are often got off the land; the first is planted in the ordinary way and the second grows from the roots of the first crop after it has been cut down. The yield of the second crop is inferior, but there is less trouble in its cultivation.

Other dry crops. The method of cultivating beans and maize does not differ from that practised elsewhere. Tobacco is worked most carefully in the Shwegyin township, where it is sown in nurseries at the end of the rains. About the beginning of September the seedlings are planted out, on land previously prepared by ploughing and harrowing, in holes distant from each other 2 or 2½ feet, the earth in the hole having been first watered. Sometimes the end of the root is nipped off to prevent its bending; it is important that the root should grow straight downwards so as to tap the moisture of the subsoil. The plants are watered again two or three days after being transplanted. Subsequent cultivation consists in keeping the ground free from weeds, nipping off superfluous shoots, and removing the growing point of the plants when sufficient leaves have formed. The plucking of the leaves is done in three stages; they are either dried in the shade and sold as leaf-tobacco or, more com-

monly, chopped fine and dried in the sun for pipe-tobacco and cheroot-fillings.

Betel-nut

Betel-nut is grown on land irrigated by canals from perennial hill-streams. The trees are raised from seed in boxes and do not bear until about fifteen years after they are planted out. Plantains are often grown for shade in the young plantations. The upkeep of the garden entails the removal of weeds three times in the year (which is done by hired labour, mostly Shan), and the supply of water during the dry months. At Midaingdaw, where the best gardens are, the irrigation works are kept up by a contractor, who is given the right of collecting all the *pet*, or branch-sheath, used for cheroot-wrappers; he can hire persons to gather the *pet* at 8 annas a viss and sells it at about Rs. 2 a viss. The nuts are collected in November and December. It is said that the palms die after about forty years and have to be replaced.

Implements.

Most of the common implements are similar to those used in other parts of the province. The curved Shan ploughshare is more generally found than the straight Burmese, and a specially large and expensive share is employed by Shans near Shwegyin. In addition to the ordinary harrow, an implement known as the *tunseik*, with twelve or more teeth, is used in some places for removing grass and weeds. The *setton* for cutting grass is a rather heavy wooden cylinder in which are fitted short blades of iron; as the cylinder is drawn along it rotates and the blades chop the grass. The common implement for smoothing the surface is the customary heavy log; near Kanyutkwin some Indian cultivators use for working dry crops a framework composed of three parallel pieces of squared wood connected by crossbars. Iron mills for crushing sugarcane are rare. The usual mill is a two-cylinder mill of wood, costing at most Rs. 35.

Manuring.

The practice of manuring fields other than nurseries is confined to the poorer soils, and is most common in the Toungoo and the northern part of the Oktwin township, and in certain areas in the Kyaukkyi township. Farmyard-manure is the only sort used; it is thrown down in heaps on the fields during the hot season and exposed to the weather until it is ploughed in. The drainage of villages is often conducted in canals on to the land and, among the Karens in Kyaukkyi, channels which may be seen leading from isolated houses to the fields. It is said that village-drainage produces a heavy crop of straw but little grain. Manure is never purchased and has no definite market value.

The straw of the rice crop is burnt on the ground about the month of March, after the cattle have eaten as much of it as they desire. To this practice the immunity of the crop from serious damage by insects and caterpillars is no doubt to some extent due.

Cattle. The average occupied area worked by each yoke of plough-cattle is 11 acres. Oxen are not bred to an extent sufficient to supply local requirements. Among the Karens there is still a considerable amount of buffalo-breeding, especially in the Shwegyin subdivision, but the numbers on the whole are falling off. In fully occupied areas the use of oxen is much more economical; buffaloes require extensive grazing and wallowing-grounds, are very subject to disease and are not useful for carting. Oxen are imported from Upper Burma; they are driven along the roads and the drovers sell them as they go, there being no recognized cattle-fairs. Both oxen and buffaloes are imported from the Shan States and Karenni and occasionally from Siam. Large numbers cross the eastern hills annually into the district, but some of them no doubt find their way into other parts of Lower Burma. The price of an ordinary pair of plough-bullocks average Rs. 120; a pair of buffaloes of the sort used by cultivators costs about Rs. 110. Hiring is common: the rate for a pair of bullocks for the ploughing-season varies from 50 to 70 baskets of unhusked rice; buffaloes are ten baskets more. Plough-cattle are well looked after and are not often seen in bad condition; in the rains they are usually given grass cut from waste ground or field embankments; artificial foods, such as oil-cakes, are very seldom supplied. Buffaloes are never hand-fed and are not kept in places where grazing in the rains is not available. Cattle other than those used for ploughing are less well looked after and have usually to forage for themselves, so that they often do not get enough to eat. Cattledisease when it occurs seems generally to come from the Shan States. There have been no serious epidemics for some years.

Grazing-grounds. Considerable grazing-reserves have been made, and there are also large areas of jungle, producing fodder, which it is not necessary to reserve as there is small danger of its being taken up for cultivation. The reservations amount to a little more than an acre per head of plough cattle on the average; but much of the land is unsuitable for grazing, and it is unevenly distributed over the cultivated area, so that in some parts there is considerable difficulty in feeding cattle in the rains when the country is water-logged and grass has

to be cut and brought from some distance. With care and expense, however, it is nearly always possible to keep cattle healthy, and the problem of grazing is not acute enough to justify the extensive reservation of land suitable for growing rice.

Other domestic animals. There is little or no pony-breeding. The district is supplied mainly from the Shan States and Karenni. Goats and sheep are kept by Indians to a small extent. Most Karen households and some Burmans keep pigs, which are fed commonly on the *peinyo* or wild calladium. They are purchased by Chinese pork-sellers and also used in local feasts and, by the Red Karens, for sacrifice.

Land-holding. Over perhaps two-fifths of the land in the plains landholder's rights have not yet been acquired. There is no communal land for cultivation, and no service-lands except a few hundred acres of *thugyisa* which pays the ordinary rates of revenue. Individual ownership is almost universal. Division of inheritance usually follows on succession without much delay and is seldom or never deferred beyond one generation. The effect of the Burmese system, under which co-heirs share equally, has not been to reduce holdings to small dimensions except in a very few cases. The greater part of the cultivation is too recent for excessive subdivision to have taken place and, in areas of old cultivation, one heir very often preserves the holding intact by buying out the others. The average area of rice-land worked by a single household is about 18 acres. There is no hereditary landlord class, the owners of land which they do not work being usually cultivators who have been specially successful, or persons who have invested in land-purchase money made in trade, money-lending or Government service. A considerable area belongs to chetties and Indian traders residing near the railway, but the majority of landlords are Burmese. Except in the northern part of the district, usufructuary mortgages are not common and land is ordinarily transferred by outright sale. Simple mortgages are more usual, but altogether less than one-tenth of the occupied area is under mortgage.

Tenancies. About one-third of the occupied area is let to tenants. The proportion seems to have diminished in the last ten years, no doubt owing to the wide extension of cultivation, but is now again on the increase. A tendency is remarked on the part of tenants to abandon the poorer lands of the district and take up the richer. The average tenant-holding is about seventeen acres. Though some tenants are recent immigrants and some are the original owners who have lost

the land through becoming involved in debt, the majority of them are permanent residents who have never owned land. Although the payment of rent reduces their agricultural income to about three-fifths of that obtained by cultivators who are owners, they are still well off and their standard of living does not fall far short of that of the others, nor do they seem to be regarded as inferior in social status. Their treatment by landlords is not harsh; rents are seldom excessive and are substantially reduced or even entirely remitted in many cases where there is a shortage of crop. Of the four kinds of tenancies,—that in which landlord and tenant work as partners, and those in which the tenant pays as rent a stated share of the produce, a fixed sum in cash, or a fixed amount of the produce,—all are found; but the first two are rare, and the third accounts for only about one-fiftieth of the total area rented, being uncommon except on lands growing crops other than rice; and even this fraction includes a number of cases in which the tenant pays no rent but only the revenue assessed on the land. Fixed produce rents are thus almost universal. The amount paid is seldom less than one-fifth and does not often approach one-half of the total produce of the holding; perhaps one-third is about the average. Rental values are very imperfectly related to the productiveness of the land and the cost of cultivation; the pressure of population, vicinity to towns, healthiness of the locality and even the prevalence of dangerous snakes are all factors influencing the rates. Produce-rents are usually delivered on the threshing-floor immediately on the completion of harvesting operations; in some cases, however, the tenant has to cart the grain to the landlord's house. The revenue is usually paid by the landlord.

Hired labour.

The custom of mutual help among cultivators is almost non-existent. Every man hires as much as he can afford. Large numbers of field-labourers come every year from Upper Burma for the cultivating season. Payment is ordinarily made by feeding the workman at the time and paying him in produce after harvest; but cash payments are common in the neighbourhood of towns and their frequency seems to be increasing. The wage of a labourer for the ploughing-season varies from 50 baskets to as much as 125 baskets of unhusked rice, besides food, betel and tobacco. The highest rates are paid in the interior of the Tantabin township where labour is scarce and the price of produce low; in this region even clothes are often provided in addition to wages. The average hire for the reaping-season is about 60 baskets. Hiring for the whole year is not common; the

amount paid averages about 130 baskets. The Taungthus in the Tantabin township have a custom of engaging servants who, for a lump sum, agree to complete all the operations necessary to put the crop in the ground. They plough the land with the owner's cattle, uproot the seedlings and do the transplanting with the labour of their families or with labour which they themselves hire, the owner of the land having nothing to do but to see that the work is done to his satisfaction. A similar contract is often made for the harvesting of the crop, the hired man making all arrangements for reaping and threshing.

Besides the regular labourers for the season, the cultivator employs hired coolies for special operations to a very large extent. Hiring by the day or by contract for ploughing is uncommon and takes place only when the cultivator is pressed for time. Uprooting seedlings from the nursery is commonly paid at the rate of 4 baskets of unhusked rice for 100 bundles. The planting out is invariably done by women, who are usually paid one basket a day. For reaping, which is done by both sexes, the daily rate is the same. Daily hiring for threshing is uncommon. In the above-mentioned cases one, two or even three meals a day are provided for the labourer. Reaping is very often done by contract, the contractor taking at least a tithe of the outturn and getting no food; but, in the south of the district, Indian coolies are in many cases hired at a lower rate in cash and supplied with rice and, occasionally, with vegetables and condiments. For the growing of other crops than rice, labour is usually hired at 8 annas a day in cash, meals being provided. Hiring generally has largely increased of late years; agricultural labourers now form about 18 per cent. of the total population of the district; the class has shared in the growth of prosperity and rates of wages are now high and quite adequate to the comfortable support of life.

Disposal of produce.

Tobacco, betel-nut and rubber are exported to a small extent, but unhusked rice is the only kind of produce which is sent out of the district in great quantities. It is commonly bought on the threshing-floor by jungle-brokers and carted at their cost. At the stations it is received by the buyers for Rangoon mills, who seem to make no attempt to keep the different varieties separate; a fact which, together with the insufficient winnowing the grain gets, explains partly the unpopularity of Toungoo paddy with the millers. Prices over the whole area served by the railway are thus governed by the Rangoon market; and the sums paid, even for the comparatively small and diminishing quantity which

is exported by river, depend practically on the rates current at the railway. Cultivators are frequently tempted by high prices to sell more than their surplus and, towards the end of the rains, suffer for their profits by having to buy food very dear.

CHAPTER V.

Forests and Minerals.

Forest Administration.

In 1856 the forests of Lower Burma were divided into six sections. The Sittang section included the whole basin from the frontier of Upper Burma, on the north, to a line drawn from the south of the Kun forests to Donzayit on the Sittang, on the south. It thus included nearly the whole of the present Toungoo district and also the Nyaunglêbin subdivision of the Pegu district. It was subordinate to the Conservator of the Pegu circle. In 1876 Shwegyin was constituted a subdivision, including roughly the civil subdivisions of Shwegyin and Nyaunglêbin. Shortly afterwards it was cut off from Toungoo and became a separate division. At this time it seems to have extended along the east bank of the Sittang to its mouth; the boundaries have since been modified. In 1894-95 both the Toungoo and Shwegyin divisions were transferred from the Pegu circle to the Tenasserim circle. The Toungoo division was split into two divisions (North and South) with effect from the 1st of September, 1912. There are thus in the Toungoo district two forest divisions and part of a third. The splitting up of the Toungoo division was so recent that it will be convenient to treat it as one for the purposes of description, the Shwegyin forests being treated separately.

Toungoo North and South :—Types of forest.

The North and South Toungoo divisions consist respectively of the Toungoo and Pyu civil subdivisions. The forests may be divided into four main types—

(*a*) upper mixed deciduous forests
(*b*) alluvial mixed deciduous forests
(*c*) *indaing* forests
(*d*) evergreen forests.

The forests classed as (*a*), which are the principal teak-bearing forests, are found over the greater part of the area

west of the railway, where they flourish on the sandstone of the Pegu Yoma, and also in places at a middle elevation in the Karen hills east of the Sittang. Outside the division they extend to the southern end of the Pegu Yoma, but are distinct from the dry deciduous forests of Prome and Thayetmyo on the western slopes. The (*b*) type is found on the flat alluvial soil between the foothills on either side of the Sittang and is similar to the forest of the Irrawaddy valley outside the dry zone. Teak is found here also. This forest differs from (*a*) mainly in being moister and poorer in bamboos; the trees are also of shorter growth. The *indaing* forest, (*c*), of which the characteristic tree is the *in* (Dipterocarpus tuberculatus), alternates with alluvial forest in the neighbourhood of the Sittang, where there are belts of laterite. Evergreen forest, (*d*), covers the Karen hills above 3,000 feet and also occurs in small patches among the moist and sheltered stream-valleys of the lower Pegu Yoma. It is of a type commonly found at high elevations throughout the wet parts of Upper Burma.

Timber.

The most important species of timber trees found from a commercial standpoint are teak (Tectona grandis), *pyingado* (xylia sp.), *kanyin* (Dipterocarpus spp.) and *padauk* (pterocarpus macrocarpus) among reserved trees, while the principal unreserved species is *in* (Diterocarpus tuberculatus). The total number of different species of timber-trees represented has not been ascertained, but over 150 are known to be fairly common and, of these, over thirty possess useful qualities which are likely to lead to a greater demand when these timbers become better known and improved means of extraction are available. Among the latter may be mentioned *leza* and *pyinma* (Lagerstrœmia spp.), *thingan* (Hopea odorata), *thitka* (Pentace Burmanica), *thitkado* (Cedrela Toona), *ingyin* (Pentacme Siamensis) and *thitya* (Shorea obtusa). A kind of sandalwood (*kalamet*) is found in places, but is not common. Various kinds of oaks (Quercus spp.) and chestnuts (castanea spp.) and a pine (Pinus khasya) occur among the hills east of the Sittang but have no commercial value. A tree occasionally met with in the forest of the Pegu Yoma is the *hmyaseik* (Antiaris toxicaria), better known as the Upas-tree. This species is of interest on account of the poisonous properties which used to be attributed to it.

Minor produce.

The main kinds of forest-produce other than trees are bamboos and canes, *thitsi* and *kanyin*-oil, thatch-grass, *shaw* and *salu*.

(1) The commonest sorts of bamboos are the *kyathaung* (bambusa polymorpha), *tin* (cephalostachyum pergracile), *thaik* (bambusa tulda), *wapyu* (gigantochloa albociliata), *wathabut* (pseudostachyum Helferi), *waya* (dendrocalamus longispathus), *kyalo* (dendr. Brandisii) and *wabo* (dendr. giganteus). Of these the first two are the most generally utilised. The male bamboo,—dendrocalamus strictus (*myinwa*), occurs in dry forest but is not common. Melocanna bambusoides (*tabindaing*) is frequently planted for ornamental purposes in *kyaungs* and gardens.

(2) The commonest canes are the *beikkyein* (calamus spp.) and *yamata* (cal. latiforlius); the former is a small kind and the latter large. Three or four other species of the same genus also occur.

(3) The oil of the *kanyin* (Dipterocarpus) is obtained by the use of fire in a hole cut into the tree near the ground.

(4) The *thitsi* (melanorrhœa usitata) is tapped for its oil.

(5) Thatch-grass (saccharum spp.) is universally employed for roofing purposes.

(6) *Shaw* is a fibre obtained from the sterculia villosa, and is mainly used for making rope, and also for pads and girths for elephants.

(7) The leaves of the *salu* (Licuala peltata) are occasionally used for thatching.

Extent of occurrence.

Oaks and chestnuts are in the main confined to the higher elevations of the Karen hills; *in* and the species which usually accompany it are found only in a strip of country some twenty miles in breadth running more or less north and south on either bank of the Sittang. Subject to these exceptions, the produce mentioned occurs throughout the division, except high up on the Karen Hills.

Quantities extracted.

For the ten years 1902—1912 the annual average outturn of teak was 23,931 tons: of other reserved woods, 11,708 tons; of unreserved timber, 31,251 tons. The annual extraction of bamboos amounts to nearly seven hundred thousand. The outturn of fuel is also very large.

Revenue.

The forest revenue until about 1887 was not sufficient to cover the expenditure. In 1890-91 the surplus approached three lakhs; in 1900-01 it has risen to five-and-a-half lakhs and ten years later it exceeded eight-and-a-half lakhs. In 1911-12 the expenditure was a little over a quarter of the revenue.

The following statement shows the area of reserved forests at five-year intervals:— Reservation.

End of year	Toungoo subdivision; square miles.	Pyu subdivision; square miles.	Total; square miles.
1875	3	0	3
1880	33	332	365
1885	389·4	343	732·4
1890	417·4	453	870·4
1895	429·4	825	1,254·4
1900	442·4	825	1,267·4
1905	442·4	836	1,278·4
1910	455	952	1,407

A further reservation of about seventy-nine square miles is proposed in the Toungoo subdivision, but the final notifications have not yet (October, 1913) been issued.

West of the Sittang practically all the largest streams, namely, the Swa, with its tributaries the Lonyan and Sabyin, and the Kabaung, Pyu and Kun streams, have been protected by the reservation of the forests at their headwaters. The only large streams which are not so protected are the Saing (a tributary of the Swa) and the Pabè, Chaungmangè and Pabaing streams (all north-bank feeders of the Kabaung). On the east of the Sittang no stream, except the Pathi, is protected against the ill-effects likely to follow the destruction of the headwater-forests by *taungya*-cutters. Part of the headwaters of the Pathi stream fall within the Thandaung reserve, and the rest of the stream is partially protected by notification under rule 26 of the Burma Forest Act. Practically the whole catchment area of the Thaukyegat, Nancho, Yaukthawa and Kanni streams is unprotected; and the headwaters of the Binbyè, Gwethe, Swèdaya and Pinthila streams are only partially protected by the Gwethe reserve. The question of proposing reserves for the sources of the Thaukyegat is under consideration; but, owing to the comparatively dense population of Karens in these hills, reservation of areas adequate for this purpose is likely to prove a difficult matter. Protection of streams.

The earliest reserves (1871—1880) were made for the protection of forest and were not on a very large scale. Such were the Pyonchaung (3 square miles), the Yane (9 square miles) and the Bondaung (37 square miles). The policy of protecting the headwaters of large streams was History of reservation.

then adopted and between 1880 and 1885 the East Swa (21 square miles), Kabaung (295 square miles), Saing (101 square miles), Kyaukmasin (40 square miles), Kanni (0·4 square mile), Sabyin (20 square miles), Lonyan (21 square miles) West Swa (107 square miles), Gwethe (48 square miles) and Gonnwè (11 square miles) reserves were made, by which the headwaters of the Swa and Kabaung were protected and much valuable timber preserved. The object of the Thandaung reserve (19 square miles), which dates from 1885, was to protect the sanitarium and the road leading to it and to give Government a free hand within this area. In 1888—1891 further large areas of valuable forest were protected by the Myohla (28 square miles), Pyuchaung (110 square miles) and Yetkansin (12 square miles) reserves. From 1891 to 1895 the Mêtindein (16 square miles) and Pyu Kun (339 square miles) reserves saved some important forests and the latter also protected the headwaters of the Pyu stream. Between 1891 and 1907 a series of small reservations were made to supply fuel and houseposts; these are the Kanyutkwin (14 square miles), Nyaungchedauk (3 square miles), Swa, Myohla, Thagaya, and Kyungon (altogether 13 square miles), Pauktaw (11 square miles), and Samo (4 square miles) reserves. In 1907 a slight extension was made in the Saing reserve, increasing its area by 7 square miles, and the Yaukthawa (26 square miles), Chaungmangè (32 square miles) and Taunggyi (17 square miles) reserves were added to the block consisting of the Gonnwè and Mètindein reserves, where there are important forests. In the same year the Myayabinkyaw (41 square miles) was formed against the east boundary of the Pyuchaung reserve, to protect the supply of *pyinkado*. In 1910 the Thandaung reserve was slightly extended (by 1·6 square miles). As has been mentioned above, some other reserves in the northern division are proposed, the Tonbo, Gwethe extension and Pyonchaung extension for timber, and the Kayinchaung for this and also to protect part of the catchment area of the stream from which it takes its name. When these are notified, very nearly one-third of the total area of the two Toungoo divisions will be reserved forest.

Unreserved forests.

The total area of unreserved forest in the divisions is roughly estimated to be 2,530 square miles. This includes the proposed reserves, some 1,100 square miles of hill-country east of the Sittang over which the department exercises only a nominal control in forest matters, and an indefinite area covered with grass, bamboos and other vegetation of little commercial value. In areas near the railway the

unreserved forests are rapidly being depleted of marketable timber, owing to the demands of the numerous sawmills in the district, and it is not expected that a supply of timber can be obtained from this source for more than 6 or 7 years to come. In the more remote parts west of the Sittang small areas of practically untouched forest are to be found in many places, scattered among *ponzos* (abandoned hill clearings), and permanent cultivation, but east of the river the greater part of the unreserved forest is cut over for *taungya*-working under a rotation of from 8 to 15 years.

Working of the forests.

Messrs. Macgregor & Co. have a purchase contract for the extraction of teak from all forests of the two divisions except the fuel-reserves. The contract is valid from the 1st of January, 1911, to the 31st of December, 1924, except for the forests in the Tantabin township where it runs from the 1st of January, 1914, only. The Yetkansin reserve is worked by Messrs. Crisp & Co. under an agreement for the extraction of all timbers other than teak, *padauk* and *thingan*. The agreement terminates on the 1st of October, 1916. Some five or six thousand tons of teak obtained from rice-fields and land likely to be brought under cultivation are extracted annually by petty contractors working under the Forest Department. Other timber and produce required for trade purposes are extracted under license.

Cinchona plantations.

Between 1870 and 1885 persistent attempts were made by the Forest Department to grow cinchona at Thandaung. The trees were constantly destroyed by fire and sun and were not commercially profitable. When Rs. 56,000 had been expended without success the work was abandoned.

Subdivisions and establishment.

Since 1902 there have been six territorial ranges with headquarters at Thagaya, Yedashe, Karenchaung, Tabetkwe, Tantabin and Pyu. These ranges are further subdivided for protective purposes into 56 beats. The following figures show the establishment in 1913:—

Rangers	8
Deputy Rangers	20
Foresters	28
Forest-guards	51
Clerks	26
Durwans	4
Resthouse-keepers	30
Peons	18
Elephant-mahouts	10
Sawmill-overseers	22
Others	14

The cost of administration has of late years risen rapidly

and, in the year 1911-12, totalled one lakh and eight thousand rupees.

Rest-houses. The following rest-houses are maintained in the North Toungoo Division (Toungoo Civil subdivision):—(1) Swa-Banbwebin, at the junction of the Swa and Lonyan streams, (2) Sagwe and (3) Myaungtha, on the upper course of the Swa stream, (4) Lonyanbauk, at the junction of the Lonyan and Sabyin streams, (5) Zadipon, up the Sabyin, (6) Hlèbwè-gyi, up the Lonyan south of Saing Banbwebin, (7) Zibyubin, at the junction of the Saing and Yane streams, (8) Saing Banbwebin, up the Saing (9) Kayinlègyin, up the Yane, (10) Minye, up the Yane, (11) Thagaya, (12) Nagyat, (13) Kanni, at the mouth of the Kanni stream, (14) Pyonchaung, at the junction of the Pyonchaung and Thaukyegat streams, (15) Kyaukmasin, (16) Gwechaung, at the junction of the Gwe and Lonyan streams. In the South Division (Pyu Civil subdivision) there are rest-houses at (1) Tabetkwe, (2) the junction of the Thabye and Kabaung streams, (3) the junction of the Kabaung and Yinganmyaung, (4) the junction of the Kabaung and Kyetsha, (5) a point on the Bon stream 7 miles south-west of Oktwin, (6) the junction of the Kywèmathe and Peinnè streams, 3 miles south-west of Kywèbwè, (7) on the Sat stream, 9 miles south-west of Kywèbwè, (8) on the Pyù stream, about 14 miles north-west of Pyu, (9) Mèzanbyu near the junction of the Mètindein and Yaukthawa streams (10) Mètindein, (11) Langwè, 6 miles south-west of Tantabin.

Shwegyin: —Types of forest and timber. In the Shwegyin subdivision, owing to the mountainous nature of the country which runs up to the Sittang-Salween watershed on the east and to the large tracts of semi-inundated country running up to the foot of the hills, on which water stands too deep in the rains to permit of cultivation, by far the greater portion of the area is covered with forest-growth. The forests may be roughly considered to lie in three strips more or less parallel to each other and differing in character according to their altitude.

(*a*) The inundated area is best represented to the north of Shwegyin, more especially between the Kyaukkyi and Sittang streams. To the south of Shwegyin the Sittang constantly washes the foothills and the alluvial lands are comparatively small in area and mostly covered with *kaing* grass and an occasional *sit*-tree (Albizia procera). In the more open parts the tree-growth is everywhere associated with *kaing*-grass. The most common water-loving species found in these parts are the *kyi* (Barringtonia acutangula), *pyinma* (Lagerstroemia flos Reginae), *saze* and *Kanyin*

(Dipterocarpus spp.). *Lein* (Terminalia bialata), *tein* (Stephegyne parvifolia), *panga* (Terminalia Chebula) and *taukkyan* (Terminalia tomentosa) also occur. The trees of the inundated area are principally used for firewood, but timber is occasionally obtained from *pyinma* and *kanyin*.

(*b*) The submontane belt (under 3,000 feet) practically comprises the area in which teak is found and roughly covers two-thirds of the whole. The quality of these forests improves towards the north, while to the south the quantity of teak generally decreases and, in the extreme south, the demand for bamboos and fuel renders the forest more valuable as a fuel-area, although teak in admixture with *pyinkado* (Xylia dolabriformis) and occasionally *pyinma*, *thingan* (Hopea odorata) and *kanyin*, occurs in patches. The characteristic bamboo of these parts is the *wapyu* (Dendrocalamus membranaceus), while *wabo* (Dendr. Brandisii), *wanet* (Dendr. longispathus), and *thaik* (bambusa tulda) occur in the hinterland. In the north of the division on the other hand, Mr. J. Nisbet (now Sir John Nisbet) reported in 1877, when submitting his proposals for the formation of the Binbyè reserve, that there are fine stretches of forest-land, essentially the home of the teak, which, if protected from the wasteful *da* of the Karen and the still more wasteful system of burning which he adopts, are capable of producing the best class of logs of the most valuable timbers. In other portions *pyinkado* of very fine growth forms almost pure forest or has *kanyin* and *pyinma* mixed with it. On the less valuable laterite of the lower parts *in* (Pentacme siamensis) is the chief wood; here again teak, *pyinkado*, *kanyin* and *pyinma* are frequently found accompanying it. At the time of Mr. Nisbet's visit many teak-stumps were seen; the Mon forests seem to have been severely worked before 1887; the conditions are ideally suitable to the production of the best teak-timber. Numerous other trees also occur, among the most important of which are perhaps *padauk* (Pterocarpus macrocarpus) and *thitka* (Pentace Burmanica). The predominant bamboos are the *kyathaung* (Bambusa polymorpha) and *thabut* (Teinostachyum Helferi), whilst the *wapyu*, *thaik* and *tin* (Cephalostachyum pergracile) are also found.

(*c*) The mountain-forests over 3,000 feet have as their characteristic trees the pine (Pinus Khasya) and rhododendron, in which the *baukwa* (Pseudostachyum polymorphum) is conspicuous. These forests appear to yield no produce for which there is at present any demand in the plains.

Reservation. Although the work of proposing reservation was commenced as early as 1877, the success attained was very small; the obstacles were the large population of Karens living in the hills and practising shifting cultivation and the existence of numerous betel-nut gardens dotted about in all directions in close proximity to the perennially-flowing streams. In later years the energies of the Divisional Forest Officer have centred in forests west of the Sittang in the Pegu district. The first reserve in Shwegyin was the Binbyè (5 square miles), formed in 1881. It was followed in 1896 by the Mon (25 square miles) and Pada (17 square miles) reserves. All these reserves are situated in the north of the Kyaukkyi township, in the sub-montane tract. For the past fifteen years further reservation has been contemplated and proposals were submitted in 1902 for the formation of a reserve to the south-east of Shwegyin and an extension of the Mon and Pada reserves. In 1909 a fuel-reserve for Shwegyin was proposed. It is stated that the forests in the division require attention which the local officer, with his heavy duties to the west of the Sittang, is unable to give. Reservation is required in the north to protect teak and *pyinkado* timber, while in the south the demands of the Rangoon market for fuel call for the conservation of the firewood-yielding species.

Working of the forests. In the earliest days of conservancy most of the timber appears to have been worked out departmentally, including woods other than teak such as *thitka*, *kanyin*, *pyinkado* and *pyinma*. In 1873-74 the Mon and Pada forests were examined for *thitka*, which was reported to be extremely scarce. Nearly all the large trees were said to have been worked out some years before. Attention was also given to minor produce, for in 1877 it was reported that the *thitsi* forests, which under lease had been very much overworked, were closed with the sanction of the Chief Commissioner. Restrictions were put on the tapping of *kanyin* and no tree of less than 7½ feet girth was allowed to be tapped, whilst no tree in any case was allowed to be notched in more than three places at one time. Five fisheries inside the Pada reserve were closed in 1881. Mr. Nisbet reported that there were 60 professional timber-traders in his charge in 1876, and it is presumed that they obtained their requirements under the permit system in so far as the timber utilised was subject to a Government royalty. From this system has been evolved the present-day extraction by licensees and all timber for trade purposes has since become dutiable. Departmental extraction up to

about the year 1884 was conducted on the half-profit system. Whether this was actually a half-sale-proceeds remuneration or extraction-costs *plus* half of the profits is not quite clear, but it is recorded that in 1883 the Mon and Pada forests yielded 1,172 logs of which the contractor received 605. In 1886 and 1887 the timber extracted by contractors was sold locally and not in Rangoon, but as a rule it has been disposed of by the Agency Division in Rangoon. As the quantities now brought down are small, they are no longer worth sending to Rangoon and local sales command fair prices, whilst Rangoon buyers always attend the auctions. There is no local consumption of teak-timber.

Working-plans.

Some of the earliest girdlings took place in respect of *pyinma*, *kanyin* and *thitka* trees for extraction to Rangoon by Government contractors. The earliest reported girdling of teak was in 1893, when 500 trees were girdled to the south of the Pada stream. From this time onward girdlings have taken place almost annually, seldom, however, exceeding 500 trees per annum and averaging a still smaller number. In 1906 the Shwegyin areas were included in a ten-years' girdling scheme for forests not under regular working-plans; but the coupes were far too large to be girdled over in a single year as prescribed; and it is now desirable that a fresh scheme should be drawn up for the Shwegyin forests separately, pending their reservation and control under a regular working-plan. The extraction of timbers other than teak is regulated by the issue of licenses. Since 1907 these have been issued under a scheme whereby the area has been divided into five blocks, comprising one or two or more of the old village circles, and each block is opened to licensees for a period of three years, after which it is closed for twelve years and the other blocks opened in rotation. The girdled teak-trees are allowed to stand for three years and are then felled and brought down by Government contractors to Shwegyin. At present there are two such contractors, but the work needs much more supervision than can be given to it under existing conditions.

Sawmills.

For years past there has been at least one sawmill at Shwegyin and, in 1883, Messrs. Kafiluddin Jamaluddin & Co., the owners, were under contract with Government and supplied over 12,000 *pyinkado* sleepers f.o.b. at Rangoon for delivery to an Indian Railway Company. This mill derives most of its timber from the Shwegyin forests, which also supply the Pegu mills to some extent. Practically no teak-timber, however, is sawn locally.

Firewood and minor produce.

On the bank of the Sittang south of Shwegyin, and by the Kyaukkyi stream, large quantites of firewood are cut annually and sent by boat to Rangoon. *Myaukkyaw, sit* and *myatya* are the species most in demand. Royalty on firewood is collected at the time of its entering Rangoon and is credited to the Rangoon division. Bamboos are largely cut from the forests to the east of Donzayit and Kunzeik, but nothing larger than culms of 1½ inches in diameter can now be obtained within five miles of the river bank and the length does not, as a rule, exceed twelve feet. Large bamboos are obtained from the forests of the Shwegyin stream. Licenses to collect *thitsi* are issued annually to Karens from the foothills to a small extent.

Revenue.

The average annual revenue falls a little short of one lakh. The bulk of the receipts consist of the sale of departmentally worked teak-timber. As Shwegyin does not form a complete division, the expenditure cannot be given accurately, but it is estimated to absorb about one-third of the total receipts.

Collection of drift.

The salving and collection of drift-timber in the Sittang forms an important part of the work of the division and, in conjunction with the despatch of Government timber to Rangoon in early days, was probably one of the foremost reasons for constituting Shwegyin a forest subdivision. It is evident that, but for constant application in this direction, Government stood to lose quantities of timber which would drift out to sea, there being no large town on the Sittang further down. Even at the present time, when the bulk of the timber of the Sittang valley is extracted by European companies, any relaxation of the control over drift would involve loss of royalty to Government. In 1877 it was reported that, of 26 waif drift logs collected, the contractor was allowed half in payment. In 1881, 5,211 drift logs were collected at Myitkyo. In 1895 the breaking of the booms enclosing the timber of the Bombay-Burma Trading Corporation at Toungoo resulted in nearly 23,000 logs being collected at the same point. Since 1900 there has been a steam-launch at Shwegyin for use in drift operations. The depôts for the receipt of drift are at Shwegyin and Myitkyo. Another is required at Natthangwin midway between Toungoo and Shwegyin. The establishment of a depôt at Winpadaw in the West Salween Division is contemplated.

Measurement-depôts.

A considerable amount of timber, estimated at 40,000 logs annually and extracted by European companies under lease from the neighbouring forests, is measured along the banks of the Sittang within the division. The timber of

Messrs. Macgregor & Co. is collected at Natthangwin, Dalaseik and Kwindala for the purpose of appraising the duty due to Government. Messrs. T. D. Finlay and Son and Messrs. Foucar & Co. both collect their Nyaunglebin timber at Donzayit for measurement, while the Bombay Burma Trading Corporation collect their *Baingda* logs at Saze and Myitkyo. The timber is then usually rafted to Rangoon by the Pegu Canal.

Fire-protection.

Systematic fire-protection was commenced in the Binbyè reserve in 1902, but sums had been paid previously to certain Karens for general fire-protection, probably for fire-tracing their hill-clearings. The Mon and Pada reserves were added in 1903 and the three areas, totalling 47 square miles, were protected with varying results, mostly unsatisfactory, up to 1911, when the protection of the Binbyè and Pada reserves, the cost of which was considered out of all proportion to the revenue they produced, was abandoned. The Mon reserve continues to be protected but, for want of supervision, the work is generally unsuccessful.

Subdivisions an establishment.

There are two ranges, with headquarters at Shwegyin and Kyaukkyi, respectively, each held by a Deputy Ranger. There are nine foresters, fifteen forest-guards, nine clerks and four peons.

Communications an building

The existing reserves have village cart-tracks and paths running through them and no further construction is required, at least until more consolidated blocks of forest have been reserved. From time to time money has been spent in blasting away some of the more difficult portions of the streams, especially the Binbyè in the Kyaukkyi township, and snags and fallen trees have occasionally been cut along the Kyaukkyi stream. Such work is however mostly left to Government timber-contractors, who keep sufficient clear passage-way for the transport of their logs. The buildings maintained by the department include offices and quarters at Shwegyin, the River Range quarters and several quarters for forest-guards. A new drift depôt office and quarters is in course of construction at Madaukgale. There is a bungalow at Midaingdaw and a single-room rest-house at Mèbok.

Mineral

The minerals of the district are of little commercial importance. There is some gold-washing near Shwegyin, as the name implies. Galena (lead-ore with a percentage of silver) is extracted to a small extent in the hills. At various times finds of soft slate, tin and steatite (soap stone) are reported to have been made, but none of these minerals are now worked. From the Myogyi quarries near Toungoo

considerable quantities of granite are extracted for use as road-metal, under the control of the Deputy Commissioner. Limestone is found in large quantities in the Toungoo township. In the Shwegyin township laterite is worked by convicts from the jail. No thorough mineralogical examination of the Karen hills has ever been made and it may turn out that there are valuable deposits which can be profitably worked.

CHAPTER VI.

OCCUPATIONS AND TRADE.

gricul-re.

Persons dependent on agriculture* formed, at the 1911 Census, 74·21 per cent. of the total population of the district, as against 68·69 per cent. for the whole province; the corresponding figures for 1901 were 69·79 and 65·26, the increase being due to the large extensions of cultivation during the decade. In addition to the above, agriculture is a subsidiary occupation with a number of persons returned under other heads. No other single occupation supports as much as 2¼ per cent. of the people of the district.

mber.

The felling and extraction, sawing and transport of timber form together perhaps the most considerable industry. The forests have been described in Chapter V; there are eighteen sawmills which, in 1913, employed ordinarily 516 men, four women and six children. We may roughly arrive at the total number of persons supported by the timber industry by adding the census figures for Sub-order I(*c*) Forestry, Group 36 sawyers, etc., Group 101 elephant-drivers, etc., Group 110 trade in wood, and Group 130 trade in fuel. The resulting total of 7,543 persons, though it includes some irrelevant items, excludes probably a number of persons returned as labourers unspecified and may be taken as a fairly correct indication of the numbers of workers and dependents connected with forest-products.†

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* *I.e.*, "ordinary cultivation" and "growing of special products." If herdsmen and cattle-breeders were included, the percentage would be a little higher.

† In occupational statistics in Burma it is generally impracticable to distinguish clearly the industry producing an article from the trade in the article; see Burma Census, 1911 Report, page 297.

Probably no other industry is large enough to do more than supply the needs of the district. Coarse pottery is carried on at Yedashe, Myohla, Thagaya, Ngwehlan and Myitkyibauk in Toungoo township, Oktwin, Kywèbwè, Tantabin, Nyaungchedauk, Pyu and Kanyutkwin, but it is of inferior quality and in quantity insufficient for local needs, which are partly supplied from neighbouring districts. Silk spinning and weaving, which in 1901 supported 327 persons, is now recorded to support only 39. No doubt the larger figure included many persons with whom it was a subsidiary occupation, but even so the decline is remarkable. It is carried on at the villages of Ngwehlan, Yebokkon, Yagaing, and Sinzwèmyaung in Toungoo township. Silkworm-breeding would appear from the census figures to be almost extinct, but it is possible that, as a subsidiary occupation, it is still of some small importance in the western hills. At a village near Toungoo there is a small manufacture of cheroot wrappers from the fibrous sheaths of the branches of the betel-nut palm (areca) brought from Akyab. Other industries.

The district contains some extensive fisheries and the catching and selling of fish support over 3,000 persons, besides being a subsidiary occupation with a number of cultivators. In the south-east of the district where fisheries are numerous, that indispensable condiment *ngapi* is commonly home-made. Mat-weaving is carried on in the Karen hills at Leikpyagyi, Tibodi, Tithasaw and other places in Leiktho township. The so-called Mèbalan mats from the hills of the Tantabin township are made of the *thabut* bamboo, and a mat 4 feet by 6 feet sells for a rupee. Goldsmiths practice their trade in all the principal villages, but are not noted for their skill, and there is no other metal-work of any importance. Fishing.

Cotton manufacture, which principally consists of the woven garments made by Karen women with imported yarns, supports 1,141 persons as against 1,438 in 1901. The difference appears to indicate the increasing use of European piece-goods; but, in the great majority of Karen households, the clothes for the family are still woven at home and this work of course does not appear in the census returns. Cotton-weaving.

The staple exports of the district are timber and unhusked rice which flow southwards by the great waterway of the Sittang, and the Rangoon-Mandalay railway. A considerable quantity of timber is sawn in the district and exported in the form of planks by rail. There are several rice-mills; but the great bulk of the surplus unhusked rice from the plain is bought by brokers for their agents on the threshing-floor, carted to the railway, bagged and despatched to the mills in Trade: Exports.

Rangoon. The principal exporting-stations in order of importance are Pyu, Kanyutkwin, Kywèbwè and Oktwin, which between them export annually an average of 40,000 tons between November and the middle of April, or more than half of the district total. Besides rice no crop in the plains is grown on a commercial scale, unless we count the sugarcane of the Zeyawadi grant. The betel-nut cultivated on the slopes of the Karen hills is considered to be of high quality and part of the surplus not consumed within the district is exported by rail to Rangoon and Mandalay. A considerable amount is also sent to the Shan States and Karenni by caravans of pack bullocks and the figures of the Trade Registration Department collected at the Toungoo, Leiktho and Kyaukkyi stations show that this trade is increasing steadily.

Exports of betel-nut.	1909-10.	1910-11.	1911-12.
	Rs.	Rs.	Rs.
To Karenni	9,731	11,415	13,579
To Southern Shan States ...	22,[illegible]56	27,838	29,749

Other commodities carried by these routes are mainly re-exports (salt, piece-goods, etc.), and not produce of Toungoo. From the south-east of the district tobacco, oranges and rubber are exported on a small scale to Rangoon.

Imports. The principal imports come by rail from Rangoon and consist of piece-goods, cotton-yarns and manufactured goods of all kinds, salt and European provisions, to which the Burman is increasingly addicted. From Upper Burma come vegetable oils for cooking purposes, chillies, onions, betel-leaf, tobacco, jaggery, earth-oil and cattle. Cattle and ponies are also largely imported from the Shan States and Karenni across the hills, whence also come cutch, lac, *thitsi*, hill-tobacco, onions, jaggery and preserved peas. Across the western hills there is an inconsiderable traffic in cattle.

Growth of trade. From 1853 to 1855 the town of Toungoo, though lying considerably to the south of the actual boundary, was the frontier-station of British Burma towards the independent kingdom and one of the chief centres of trade between the two countries, corresponding to Thayetmyo on the Irrawaddy. A Custom-house was established after the annexation of Pegu

and until 1863 the British Government collected export and import duties on the trade. In 1863 these dues were abolished and in 1867 the Burmese Government also lightened the burden of customs on the north side of the frontier; but the great distance from Rangoon and the imperfect communications prevented any considerable development of commerce (even in 1880 after the opening of the Pegu-Sittang canal it was stated that "Toungoo can only be reached from Rangoon in twelve or sometimes in twenty days by a laden boat"); and it was not till 1885, on the very eve of the annexation of Upper Burma, that the completion of the Rangoon-Toungoo railway rendered a great expansion possible. The line was carried on to Mandalay in 1889. Running as it does through the centre of the district, it is an excellent channel of trade; each railway-station is a distributing-centre, so that nearly every large village throughout the district has its Chinese shop, doing a brisk trade in European textiles and provisions, household stores, cigarettes, fancy-goods and cheap glazed earthenware.

CHAPTER VII.

MEANS OF COMMUNICATION.

The main line of the Burma Railway (completed from Rangoon to Toungoo in 1885 and northward to Mandalay in 1889) runs through the centre of the district from south to north (miles 122 to 207). It is nowhere more than 12 miles from the Sittang and generally much nearer. There are at present eighteen stations at Kanyutkwin, Nyaungbintha, Pyu, Zeyawadi, Nyaungchedauk, Kywèbwè, Banbwegon, Oktwin, Thaungdainggon, Toungoo, Kyedaw, Kyungon, Yedashe, Kongyi, Swa, Thagaya, Myohla and Yeni. The district is thus adequately served and there is no prospect of any further railway-building. Railway.

The Sittang is the only important waterway and, since the old royal road from Pegu to Toungoo had decayed and was broken in many places, was, before the construction of the railway, the main channel of traffic in the district, though even after the opening of the Pegu canal a laden boat could not get from Rangoon to Toungoo in less than twelve days. It is still used to a large extent by country boats and occasionally by steam-launches, but its course is so River.

tortuous that, for a journey of any length, it is almost always quicker for the traveller, even from a village on its banks, to go round by railway. In the rains, however, the country between railway and river is almost everywhere impassable for cart-traffic and then the river is the only means of access to places on or near its banks except for foot-passengers. Where time is no object, also, much of the produce of the riverine tracts, particularly of the left bank as more remote from the railway, is more cheaply exported by river down to Shwegyin and Rangoon. There is no prospect of any considerable development of this traffic.

Roads.

Apart from the railway and the river, communications throughout the district are difficult in the rainy season; the central plain is waterlogged and the hills are often rendered impassable by torrents. One travels slowly and tortuously on foot along the bunds of rice-fields, or by small boats over the flooded plains. The people of agricultural villages seldom leave their homes during this period. Certain roads have, however, been constructed which are more or less passable all the year round, except at times of very high flood.

The main-road system.

I. The principal road of the district is the main north and south road, running generally close to the railway line. It is 88½ miles long. The section south of Toungoo has an average width of 16 feet, of which 10 feet are metalled for 9 miles between Toungoo and Oktwin, and for the rest of the distance only metalled in a few places where it passes through villages. It follows more or less the line of the old royal road made by King Tabinshweti of Toungoo, who conquered Pegu in the sixteenth century. From Pyu to Toungoo it is in fairly good condition, but south of Pyu the watercourses are unbridged and it is liable to frequent interruptions. The Kabaung stream just south of Toungoo is not bridged, being fordable except in the rains; there is a licensed ferry which sold (1913) for Rs. 1,500. The section north of Toungoo, following the line of the old frontier road made after 1852 and of an earlier royal road said to have been made by Alaungpaya from Ava, was originally fully metalled, but since the construction of the railway, the metalling has not been kept up except just outside Toungoo and where it passes through villages. The average width is 20 feet. It is drained and the smaller watercourses bridged throughout, but the Swa stream is now crossed by a ford at Swaminlan.

This road will eventually form part of the Rangoon-Mandalay trunk-road but, especially in its southern section,

will need a great deal of raising, bridging and metalling before it can become a useful channel for through traffic. It has nine inspection-bungalows at Kanyutkwin, Pyu, Nyaungchedauk, Kywèbwè, Oktwin, Kyungon, Yedashe, Swa and Myohla. There is also a Forest Department rest-house at Thagaya just off the road.

Branches. The following roads, in order from south to north, branch off from this main road: —

(*a*) Short metalled feeder-road to the railway at Kanyutkwin.

(*b*) A similar road at Pyu.

(*c*) Road from Pyu to Okpyat, on the Sittang at the mouth of the Pyu and Yaukthawa streams. This road is 11¼ miles in length, with an average width of 16 feet. It was formerly metalled, but the metalling is now only kept up where it runs through villages. It has twelve bridges and is drained throughout. In the eleventh mile the Pyu stream, eating away its bank, has recently made a diversion necessary. At Okpyat there is an inspection-bungalow and a licensed ferry across the Sittang.

(*d*) Short feeder-road at Nyaungchedauk.

(*e*) Road from Kywèbwè to Myozo, a village on the Sittang with a sawmill. The road is 2 miles 1 furlong in length, metalled only within village limits, and has three bridges. It was completed in 1902-03. At Myozo there is a licensed ferry, which fetched over Rs. 2,000 at the auction of 1913.

(*f*) & (*g*) Feeder-roads at Banbwegon and Oktwin.

(*h*) Road from Oktwin to Onbin on the Sittang, where there is a licensed ferry, which sold (1913) for over Rs. 2,000, and a sawmill. The road is just over 2 miles long, with an average width of 16 feet, having ten timber bridges. It is not now metalled, and is difficult during the rains. It was constructed in the early eighties.

(*i*) Road from Toungoo to Tantabin, leaving the main road south of the Kabaung stream, 4½ miles in length from the point of departure and with an average width of 16 feet. It is bridged and drained; of late years the metalling has not been kept up. This is one of the oldest made roads in the district. Tantabin lies on the left bank of the Sittang and there is a licensed ferry, which has been sold for a period of three years for Rs. 3,700. On the Tantabin side there is a bungalow and the road is continued to Natywa (6½ miles), embanked but unmetalled, with no bridges and an average width of 16 feet.

(*j*) & (*k*) Feeder-roads at Kyungon and Yedashe.

(*l*) Road from Yedashe to Karenchaung on the Sittang, 6¼ miles long and 16 feet wide. It is unmetalled, but bridged and drained throughout. It ends at Kywèyaingbyin where there is a licensed ferry over the Sittang, Karenchaung being on the bank opposite and having an inspection-bungalow. From Karenchaung it is continued 22 miles to Nancho by an unmetalled track with log-bridges. Karenchaung is the headquarters of a Forest Ranger.

(*m*), (*n*) & (*o*) Feeder-roads to the railway at Swa, Thagaya and Myohla.

Additions proposed to the main system.

Proposed additions to this road-system are :—

(1) A road from Kanyutkwin railway-station to Meikthalin on the Sittang, 12 miles in length, which will open up an extensive tract of rice cultivation.

(2) A road from Okpyat to Mon, on the east of the Sittang, a continuation 4 miles long of road (*c*) described above.

(3) Road from Mon northwards, to meet at Natywa road (*i*) above described.

(4) Road from Myozo to Zayatkyi, a large new village in Tantabin township inhabited by Taungthus: 7 miles long and a continuation of road (*e*) above.

(5) A feeder road connecting Kongyi railway-station with the main road.

District Cess Fund Roads.

All the roads hitherto mentioned are maintained from Provincial funds. There are also four roads in connection with this system which are maintained by the District Cess Fund :—

(*p*) Embanked bridle-path six feet wide from Kyauktalin village south of Oktwin to join the main road, 900 yards in length.

(*q*) A similar path from Indaing village south of Kyauktalin, of about the same length.

(*r*) Road from Oktwin to Yetho, a village 3 miles to the west, embanked and bridged, 15 feet wide and unmetalled, forming a continuation of the metalled feeder-road (*g*) in Oktwin village.

(*s*) Bridle-path from Myohla to Payagon, so called, though it actually commences at Madawbin, 4 miles west of Myohla and ends at Wayèbauk short of Payagon, a length of 16 miles. The road is mainly used for Forest purposes, and the Forest Department bore part of the cost of its construction. It averages 8 feet in width, and has log-bridges over watercourses. There is a District Cess Fund bungalow at Wayèbauk and the Forest

Department has rest-houses at Kayinlègyin (an old Frontier guard-house) and Saing-Banbwebin.

II Of the Toungoo-Thandaung road, the eastern section from Pathichaung to Thandaung was originally constructed as a bridle-path by the Forest Department to reach the cinchona-plantations and was afterwards maintained when Thandaung was tried as a sanitarium for British troops. It is 9¼ miles in length and is still maintained by the District Cess Fund as a mule-track, with an average width of 8 feet. The western section from Toungoo to Pathichaung was constructed later as an embanked road, about the year 1882, after a visit by the Chief Commissioner of British Burma. Since 1905 the Sittang has been bridged at Toungoo at a cost of Rs. 2,80,000 and a graded and metalled cart-road constructed from Provincial funds right through to Thandaung, a distance of 28½ miles, at a cost of Rs. 9,21,000. The road is bridged and drained throughout and can be traversed by motor-cars all the year round. A motor-mail service is maintained daily during the dry season and twice a week during the rains. There are bungalows at Pathichaung, Shwenyaungbin and Thandaung. Eastern road-system.

In connection with this main road there are— Connected roads

(*a*) The Thandaung Circular road, 6 miles in length, but maintained only for 1½ miles, 16 feet in width and partially bridged.

(*b*) Bridle-path from Thandaung to Leiktho, 22 miles in length, with an average width of 6 feet; at Kyolongyi, 12 miles from Thandaung, and at Leiktho there are bungalows.

(*c*) Bridle-path from Leiktho to Yado, a police-station on the frontier of the Southern State of Mongpai. The road is 28 miles long, 8 feet wide, with log-bridges; and is the route of a considerable amount of traffic with the Southern Shan States. An iron suspension-bridge is proposed where it crosses the Thaukyegat stream. There are bungalows at Kosaplo (14th mile) and Yado.

Leiktho is also connected with Kanni (22 miles) on the bank of the Sittang, and with Karenchaung higher up.

The above roads are maintained by the District Cess Fund. There is a bridle-path from Leiktho to the Nancho plantation, 8½ miles to the north, maintained by the Township Officer, Leiktho.

III. The road from Shwegyin to Kyaukkyi is 34 miles long, with eight bridges. It is a fair-weather road, running along the edge of the rising ground to the east of the Kyaukkyi stream, and is maintained by the District Cess Kyaukkyi-Shwegyin system.

Fund. There are bungalows at Shwegyin and Kyaukkyi, and small rest-houses at Thanzeik and Bawgata. It is proposed to convert this road into a graded cart-road; near Shwegyin it passes through growing rubber-estates which in time may furnish a considerable traffic. It is also proposed to carry it on from Kyaukkyi to Mon, where it will join the intended Natywa road running right through to Tantabin and Toungoo.

In connection with this road there are the two following:—

(*a*) Road from Shwegyin to Kunzeik (22 miles), a continuation to the south of the Kyaukkyi-Shwegyin road, following the left bank of the Sittang. This is a fair-weather road with three bridges, and is maintained by the District Cess Fund. There is a bungalow at Kunzeik and a licensed ferry crossing the Sittang.

(*b*) Road from Kyaukkyi to Natthangwin, a raised bridle-path 6 feet wide, with bridges, about 8½ miles long. It was lately almost wholly destroyed by floods, but has been repaired. There is a licensed ferry over the Sittang at Natthangwin, which sold (1913) for Rs. 1,442, connecting it with a similar road in the Pegu district on the other bank, which runs to the railway at Penwègon. The road can be used by bicycles. It is maintained from Provincial Funds.

Minor suburban roads.

The District Cess Fund also maintains several short length roads in the suburbs of Toungoo Town but outside Municipal limits.

Routes over the hills.

In addition to the State-maintained roads, there are a few trade-routes crossing the eastern and western hills which can be traversed only by foot-passengers and pack-animals. The trade has been dealt with in Chapter VI.

East.—(1) Route from Toungoo and Yedashe *viâ* Leiktho and Yado into the Southern Shan States (*see* road II (*c*) above).

(2) Route from Tantabin *viâ* Bawgaligyi and the north-east of Tantabin township to Kwachi and the lead-mines in Karenni.

(3) Route from Kyaukkyi *viâ* Lummati (Salween district) to Papun and Karenni.

(4) Route from Shwegyin *viâ* Mawbu to Papun.

(5) Route from Shwegyin and Kunzeik *via* Mèka to Papun.

West.—(1) Route *viâ* Chaungmagyi into Thayetmyo and Taungdwingyi (Magwe district), a continuation of road I (*s*) above.

(2) Route up the Sabyin tributary of the Swa into Thayetmyo district.

(3) Route from Toungoo up the Kabaung valley into Prome district.

Posts. The post-offices of the district are under the control of the Superintendent of Post Offices, Pegu. The postal establishment consists of 1 head-postmaster, 1 deputy-postmaster, 9 sub-postmasters, 9 branch-postmasters, 6 clerks, 3 signallers, 5 probationers, 15 postmen, 4 mail-peons, 1 letter-box peon, 7 village postmen, 1 mail overseer and 9 mail-runners.

The following table shows the services :—

Post Office.	Status.	Service.
Toungoo ...	Head office ...	By rail. Daily.
Pyu	Sub-office (combined post and telegraph).	Do. do.
Kanyutkwin ...	Do.	Do. do.
Oktwin ...	Do.	Do. do.
Yedashe ..	Sub-office ...	Do. do.
Zeyawadi ...	Do ...	Do. do.
Myohla ...	Branch office ...	Do. do.
Thagaya ...	Do. ...	Do. do.
Swa	Do. ...	Do. do.
Kywèbwè ...	Do. ...	Do. do.
Nyaungchedauk ...	Do. ...	Do. do
Nyaungbintha ...	Do. ...	Do. do.
Thandaung ...	Sub-office (combined post and telegraph).	By motor-car; 15th February to 15th May, daily except Sunday; the rest of the year, twice a week.
Shwegyin ...	Do.	By runner. Daily.
Kyaukkyi ...	Do.	Do. Thrice a week.
Sunthaik ...	Do.	Do. Daily.
Tantabin ...	Branch office ...	Do. Thrice a week.
Leiktho ...	Do. ...	Do. do.
Kanna-Banlaung ...	Do. ...	Do. do.

Telegraphs. The Telegraph administration of the district is divided between the Superintendents of the Maymyo and Moulmein divisions. The Maymyo division includes the offices along the railway north of Toungoo; the Moulmein division includes the Toungoo office and those along the railway to the south, the Toungoo-Thandaung line completed in 1906 at a cost of Rs. 10,300, and the Shwegyin-Sunthaik-Kyaukkyi

line completed in 1910 at a cost of Rs. 13,460. Shwegyin is connected with the railway-line at Nyaunglebin by a line which falls outside the Toungoo district. The office at Toungoo is distinct from the post-office ; the other offices are at railway-stations, or combined with post-offices as shown in the preceding paragraph.

CHAPTER VIII.

FAMINE.

Scarcity in the hills.

Over the greater portion of the district there is no danger of famine. The only part which is classed as insecure for the purposes of the Famine Relief Programme is Leiktho township ; and the opinion is expressed in the "Analysis of Districts with reference to security against Famine" that even there the demand for food would, in case of scarcity, be met by private traders without Government assistance. In 1905-06, however, there was considerable apprehension of scarcity in Leiktho and rice was distributed by Government to a number of villages ; but the cost was afterwards recovered from the villagers and the construction of the road from Thandaung to Leiktho—not strictly a Relief-work—furnished employment for a number of needy Karens. The cause of scarcity in hill-tracts is stated to be the seeding of the bamboo and consequent multiplication of rats which eat the green rice-plants. In the late rains of 1912 the high price of rice, which prevailed owing to improvident sales, caused some distress in the plains and scarcity was anticipated in Leiktho, but matters never came within measurable distance of famine and it is probable that there has never been a death from starvation in the district.

CHAPTER IX.

GENERAL ADMINISTRATION.

The District Administration.

Toungoo district was formed in 1853 on the effective occupation of the province and was administered by a Deputy Commissioner, subordinate to the Commissioner whose headquarters were at Rangoon. Since 1870 it has

formed part of the Tenasserim division, the headquarters of the Commissioner being at Moulmein. For administrative purposes it is divided into three subdivisions: Toungoo, containing the Yedashe, Toungoo, and Leiktho townships; Pyu, containing the Pyu, Oktwin, and Tantabin townships; and (since 1895) Shwegyin, containing the Kyaukkyi and Shwegyin townships. There are only two towns municipally governed, Toungoo and Shwegyin. The following are specially notified as towns under the Lower Burma Town and Village Lands Act, 1898, but for administrative purposes are merely villages:—

Myohla, Swa, Yedashe, Oktwin, Kywèbwè, Nyaungchedauk, Pyu and Kanyutkwin.

Village-tracts.

The village administration is carried on under the Deputy Commissioner by three Subdivisional Officers, eight Township Officers, and by headmen in charge of village-tracts. In 1912 there were two *taikthugyi's* or circle-headmen, with 22 headmen subordinate to them and unremunerated, and 701 revenue-collecting village headmen. Thirty-two headmen held special criminal powers and 44 special civil powers. Fines inflicted by headmen amounted to Rs. 6,832. Sixteen men received rewards for assisting in Excise and Opium seizures, and 30 for assisting the Police. There were 2,805 ten-house-*gaungs* (unremunerated). In five cases fines were imposed on village-tracts under sections 13 or 14 of the Village Act. It is stated that in many places, and particularly in the hills, nobody wishes to be headman, the small remuneration not compensating for the trouble and expense involved. The commission on revenue collections in some cases does not cover the expense of official journeys to the township headquarters.

Of the village-tracts, 70 had in 1911 more than 1,000 inhabitants. An account of the most noteworthy places will be found in Chapter XIV, arranged by townships.

Criminal Justice.

Toungoo is at present the headquarters of the Toungoo Sessions Division, including Toungoo and Pegu districts, and is the residence of the Sessions Judge. The administration of criminal justice within the district is controlled by the Deputy Commissioner as District Magistrate. There are Subdivisional Magistrates at Toungoo, Pyu and Shwegyin; a Headquarters Magistrate (who is also Treasury Officer), an Additional Magistrate (who is also Subdivisional Judge) and a Bench of Honorary Magistrates at Toungoo; an Additional Magistrate (who is also Subtreasury Officer) at Oktwin; and Township Magistrates at the eight township headquarters.

The district is rapidly being opened up, the population is on the increase and crime is naturally growing. The total figures showing offences reported are fallacious guides, as they include prosecutions under special and local laws which vary enormously from year to year. The following table shows the figures for certain specified classes of cases for the last three years :—

	1910.	1911.	1912.
Offences against property ...	958	973	1,039
Offences against the human body	488	496	523
Murder	14	18	24
Robbery and dacoity ...	24	35	43
Cattle-theft	140	117	160

It is stated that the amount of property involved in the robbery and dacoity offences was in most cases very small and that these crimes, as well as murders, usually occur in outlying huts away from villages. Cattle-thefts are mainly from grazing-grounds and isolated dwellings and are largely due to the habit of leaving the animals untended for long periods. Many drovers from Upper Burma pass through the district on their way to Pegu and this accounts for a number of cases. The existence of a broad belt of wild and almost uninhabited jungle along the whole western part of the district gives an easy retreat to criminals and it is asserted that many offences are committed by men crossing the Yoma from the Prome and Tharrawaddy districts and returning immediately afterwards. The number of prosecutions under the preventive sections of the Criminal Procedure Code has increased, vigorous action having been taken to cope with the growth of cattle-theft and serious crime. The increase of work lately necessitated the appointment of an extra Magistrate. The Honorary Magistrates are able to relieve the ordinary courts of a number of petty cases under the Police and Municipal Acts.

Civil Justice. Civil Justice within the district is administered by a Divisional Judge (who is also Divisional Judge of Pegu) ; a District Judge (who is also District Judge of Pegu) ; one whole-time Subdivisional Judge for the Toungoo and Pyu subdivisions, sitting at Toungoo ; a Subdivisional Judge at Shwegyin who is the Subdivisional Officer ; a whole-time Township Judge for Toungoo and Yedashe, sitting at Toungoo, and another for Oktwin and Pyu, sitting at Pyu, both of these with Small Cause Court jurisdiction ; and four Township Judges who are the Township Officers of the remaining townships.

The total number of suits instituted rose from 2,570 in 1911 to 3,191 in 1912; while the total value fell from Rs. 5,85,689 to Rs. 5,61,652. The increase in the number of suits is attributed largely to the rapid development of the Tantabin township. The average duration of contested cases rose from 83 days to 91 days. The number of applications for the execution of decrees rose from 1,651 to 1,972. Litigation.

Appellate jurisdiction is exercised by the Divisional Court in appeals from the Subdivisional Judges, and from the District Judge where the value of the suit is less than Rs. 5,000; and by the District Court in appeals from Township Judges. In the Divisional Court 27 appeals were instituted in 1911 and 38 in 1912. Of appeals in which orders have been passed 73 per cent. were unsuccessful in 1911 and 64 per cent. in 1912. In the District Court 125 appeals were instituted in 1912, as against 142 in the previous year. Only 58 per cent. of the appeals were entirely unsuccessful and this is attributed to the judicial inexperience of those Township Judges who are also Township Officers. Appellate jurisdiction.

In 1912 the District Court received 27 petitions under the Provincial Insolvency Act, all of them petty in the amount of the debt involved. Insolvency jurisdiction.

Owing to the presence of the District and Divisional Courts, there is a large bar at Toungoo; and at Pyu also there is a considerable number of pleaders.

The Deputy Commissioner is Registrar under the Indian Registration Act, 1908, and there are Sub-Registrars at all the township headquarters except Leiktho. The total number of documents registered affecting immoveable property of which registration is compulsory was 2,121 in 1912 as against 1,929 in 1911; the aggregate value was only Rs. 18,76,949 against Rs. 23,10,950. Two hundred and thirty-nine documents affecting moveable property were registered, as against 303 in the previous year; the aggregate value, however, increased from Rs. 1,47,657 to Rs. 1,82,877. The total receipts from fees and fines amounted to Rs. 6,833, as against Rs. 6,137 in the preceding year. The total expenditure was Rs. 3,605 against Rs. 3,617. More than two-thirds of the registration of the district is done at the Toungoo and Pyu offices. Registration.

Toungoo is the headquarters of the Toungoo Battalion of Military Police, one of the two Lower Burma Battalions, with a total strength of 2,137, composed of 330 Sikhs, 157 Gurkhas, 110 Karens, and 1,540 men of other Indian races. Of this force, 455 are at the headquarters of the Battalion Military police.

and 186 distributed among 8 posts in the district, furnishing guards and escort for prisoners and treasure. The remainder are in other districts. The Adjutant in command of the Battalion holds charge of the duties of the special Karen recruiting officer. An Assistant Adjutant is also stationed at Toungoo.

Civil Police. The Civil Police Force of the district consists of a District Superintendent, two Assistant District Superintendents (one at headquarters and one at Pyu), six inspectors, 33 sub-inspectors, 48 head-constables and 318 constables. There are police-stations at Toungoo, Ogon (a suburb of Toungoo), Thandaung, Yedashe, Yinganbauk, Myohla, Leiktho, Tantabin, Ôktwin, Nyaungchedauk, Pyu, Kanyutkwin, Shwegyin, Kunzeik, Kyaukkyi and Mon; and outposts at Payagôn and Yado. The cost of the district establishment was Rs. 1,58,927 in 1911 and Rs. 1,72,262 in 1912.

Excise. The Excise establishment of the district, now on a permanent footing, consists of a Superintendent, an Inspector, five Resident Excise Officers, seven Sub-inspectors and the usual number of menials. There are 4 opium-shops, 29 shops for the retail vend of country fermented liquor, 2 for country spirit and 13 for foreign liquors. There are also two wholesale foreign liquor shops. The distillery at Toungoo produces country spirit and foreign spirit and supplies several districts in Lower Burma; but it can with difficulty stand the competition of cheap Java rum which is imported and diluted. The proceeds of the duty on distillery-spirit fell from Rs 35,328 in 1911-12 to Rs. 30,035 in 1912-13 The taste for imported liquors among Burmans in the towns shows no symptoms of decline. There is a good deal of illicit distillation in places remote from liquor-shops. The inhabitants of the Karen hills are permitted to produce and consume *Kaung-ye* without license. *Ganja* has for many years been brought down by Burman traders from the western hills, where it is grown in remote spots by Karens, and sold in the plains; and several thousand tolas are seized yearly, 166 offences having during the four years 1909—1913 been detected in respect of this drug,—more than in respect of any other liquor or drug except opium—although its consumption is confined to natives of India.

The issues of Government opium to licensees appear to be declining gradually and now stand at slightly over 1,800 seers per annum. Smuggled opium comes over the Karen hills from the east and by rail both from the south and

north. The number of registered Burman consumers is, of course, diminishing and was 217 in the year 1912-13. In the same year there were forty arrests for the possession of cocaine, and the habit of taking this drug is said to be on the increase. The village headmen of the district give very little assistance in the detection of excise offences.

Civil Veterinary Department. There are Veterinary Assistants at each of the subdivisional headquarters, working under the orders of the Subdivisional Officer. The Veterinary Inspector in charge of the Toungoo district has his headquarters at Yamèthin.

Public Works. The Toungoo Public Works Division, forming part of the Pegu Circle, includes the whole of the district and also part of the Pegu district. The headquarters of the Executive Engineer are at Toungoo, as also of the officers in charge of the Karen hills and headquarters subdivisions, the former including the whole of the northern part of the district. The subdivision of Nyaunglèbin (Pegu district) includes the Shwegyin and Kyaukkyi townships of the Toungoo district. The roads and bungalows maintained by the Department have been dealt with in Chapter VII. There is only one embankment, constructed in 1911 across a depression in the left bank of the Sittang at Luat (Kyaukkyi township). The cost was borne by the District Cess Fund. Its object is to keep floods out of the low-lying rice-lands between the Kyaukkyi stream and the Sittang.

Ecclesiastical Department. The missionary of the Society for the Propagation of the Gospel receives an allowance from Government as Chaplain at Toungoo and is subject to the Bishop of Rangoon and the Archdeacon of Rangoon. The Deputy Commissioner and the Subdivisional Magistrates (being Christians) are Registrars under the Indian Christian Marriage Act, 1872, for the district. Under the same law the American Baptist missionary at Shwegyin is licensed to solemnize marriages; and there are 51 Karens licensed to grant marriage-certificates to native Christians. The missionaries of various denominations are in most cases Ecclesiastical Registrars under the Births, Deaths and Marriages Registration Act, 1886. The work of Christian missions has been dealt with in Chapter III.

Other departments. The administration of other departments of Government is treated under the head of the subject-matter with which they deal: Forest Department (Chapter V); Post Office and Telegraph Departments (Chapter VII); Medical and Prison Departments and Registration of Vital Statistics (Chapter XIII); Education Department (Chapter XII).

CHAPTER X.

REVENUE ADMINISTRATION.

Histori- al.

Of the revenue-system of Toungoo under the Burmese kings little appears to be known. It is recorded that in 1637 A.D., capitation was levied at Re. 1 per head, and there was also a tax on the Karen garden-owners paid in betel-nut. Under the last dynasty, the revenue of the district consisted chiefly of the house or family tax, assessed on Burmans and Karens alike, together with small dues on fisheries and gardens and a land-tax calculated on the number of plough-cattle. After the British annexation, revenue was collected under the heads of land-revenue, capitation, excise, fisheries, customs and a few smaller items; and in the year 1856-57 amounted to Rs. 1,14,613. The customs-dues on trade with Upper Burma were abolished in 1863.

and enue :— arly ttle- ents.

The rates of land-revenue at first varied from Rs. 1-8 to 8 annas per acre. In 1863-64 a settlement for five years was made, under which the rates were somewhat lowered and were to be applied only to land under cultivation at the time of settlement. Participation in the settlement was voluntary, but the terms were accepted by the great majority of cultivators. In 1866-67 the revenue approached two lakhs of rupees. In 1868 a fresh settlement was made for a period of ten years. In 1880-81 the rates were revised and were equalized as between cultivators who had and had not accepted the previous settlements. From that date until the regular settlement of the district rates for rice-land varied from 6 annas to Rs. 1-12; for garden-land, from Rs. 1-8 to Rs. 2-8; and for miscellaneous cultivation there was an uniform rate of Rs 1-8. In 1890 a proposal to enhance the rates was negatived on the ground that the district was poor, holdings small, and cultivators lacking in capital.

The Shwegyin subdivision, belonging until 1895 to a separate district, has a distinct fiscal history. In 1853-54 an acre rate of Rs. 2 was fixed. This was revised in 1859 and again in 1863, after which date Re. 1 per acre was the highest rate. In 1868 and 1871 rates were again revised, gardens being assessed at Rs. 2. In 1880-81 garden-rates increased to Rs. 2-8; the assessment on rice-land was hardly altered, owing to remoteness from markets and the

destruction done by floods. Rates were fixed in Shwegyin by circles, not as in Toungoo by *kwins* (survey blocks).

First regular settlement. The first regular settlement of the district was conducted in two sections. The first included the surveyed area in the Shwegyin subdivision and in the old Zeyawadi township, which, with the addition of the Dinnyawadi circle, has now been split up into the Pyu and Ôktwin townships. This area was settled in the year 1898-99. The second included the surveyed area of the Dinnyawadi circle of Ôktwin township, and the Tantabin, Toungoo (Myoma) and Yedashe townships, but not the town and old cantonment of Toungoo, and was settled in 1899-1900. At the time of settlement the incidence of revenue at the old rates was in the first section Rs. 1-13 per acre, and in the second somewhat less than a rupee. In the classification of the land, no distinction was made between irrigated and unirrigated embanked land. The assessment-tracts were not continuous areas, but were formed by grouping together *kwins* of similar fertility in whatever part of the area they were situated. In the Shwegyin the system of tracting was not adopted, and the soil was divided according to fertility into five classes. In the remainder of the district the soil in each tract was divided into two or three classes. The rates on soil-classes were fixed after considering the value of (*a*) a quarter of the nett produce, that is the gross produce minus the out-of-pocket cost of cultivation, (*b*) half the nett profits, that is the gross produce minus the cost of cultivation and the cost of living, (*c*) rental values; but the rates actually imposed fell far below any of these standards. In the first section they appear to have been fixed mainly with reference to those in force in the neighbouring Nyaunglebin subdivision, which had been settled in the previous year; in the second section they approximated to one-ninth of the nett produce. In the first section, where there are valuable plantations of betel-nut and other fruit trees, garden-rates rose as high as Rs. 6; in the second section they were assessed at an uniform figure of Rs. 2-8. A general rate of Rs. 3 was fixed for land growing miscellaneous crops. In certain areas land growing sugar-cane was classified and rates of Rs. 6 and Rs. 4 imposed. The highest rate on rice-land was Rs. 3-4. The general effect of the new rates was a considerable enhancement of revenue and the demand for the whole district rose to Rs. 5,78,082 in 1901-02, the first year in which the revised rates came into force for the whole area. Since that date there has been a rapid extension of cultivation and the demand has advanced by nearly 49 per cent. in eleven

years. The incidence of land revenue per acre matured in the settlement area stood in 1912-13 at Rs. 2-2-3.

Revision settlement.

In 19 10—13 revision settlement perations were undertaken for the whole area previously settled in two sections. It was estimated that an enhancement of 20 per cent. might be anticipated. The area dealt with included the former cantonment and the town of Toungoo, and a few *kwins* in other parts of the district which had been surveyed since the previous settlement. Twenty assessment tracts were formed and within these the soil was classified, irrigated and unirrigated embanked land being distinguished, and the rates proposed for such land being worked out separately for each class in each tract, a fraction of the nett produce, varying from one-seventh at the lowest to a little over a quarter at the highest, being generally taken as the basis. A special uniform rate was proposed for hot-weather rice. In the assessment proposals for unembanked (*ya*) land, the area of which is small, no distinction was made between the tracts; and the same set of rates was proposed for the whole district, *taungyas* also being included under this head, and the rates being applicable whatever crop might be grown, the only exceptions being tobacco and sugar-cane, for each of which a special rate was proposed. The classification of gardens also was uniform throughout the district, except in three tracts growing betel-nut palms where a special rate was proposed for the best gardens. Plantains, being impermanent, were not included among gardens and land growing them was usually classified as *ya*-land.

It is anticipated that the new settlement will give some relief to cultivators of the poorer soils, especially near Toungoo where the land is exhausted and in the Kyaukkyi township, while at the same time enhancing the revenue-demand on the better lands, which have hitherto not been taxed up to the pitch which their steady fertility enables them to bear and which is easily borne by similar lands in other parts of the province. The orders of Government have not yet (October 1913) been passed on the Settlement proposals.

Zeyawadi Grant.

In March 1896 a grant of over 15,000 acres of land was made to Jai Prakash Lal, Rai Bahadur, C.I.E., of Dumraon, on the understanding that he was to import cultivators from poor regions in India to work it. The preliminary clearing was largely done by Burmans, who were allowed to occupy the land for a year or two, after which it was leased to the immigrants, of whom large numbers now work it. The grant is excluded from Settlement operations.

Fishery revenue is obtained partly from licenses on implements, but principally from the rent of leased fisheries which are sold by auction yearly. The demand for the year 1856-57 was Rs. 3,992; for 1866-67 it was Rs. 7,515; in 1901-02 it had risen to Rs. 37,482. Since that date a special inquiry has been held into the fisheries of the district, which resulted in a considerable increase; and in the year 1912-13 the demand stood at Rs. 88,296. The greater part of this comes from the south of the district. Fishery revenue.

The revenue from capitation-tax (in which is included Karen Chief Tribute) has expanded steadily with the growth of the population. In Toungoo town land-rate in lieu of capitation is levied. If this be included, the incidence of capitation per head of the population is about 13 annas. In the Settlement area (roughly the Sittang valley) it is over 14 annas. In the year 1912-13 a total of 59,092 persons were assessed and 6,204 exempted from capitation, while land-rate was paid on 437 acres. Capitation-tax.

Under miscellaneous land-revenue are included royalties on certain minerals, receipts under the Village Act, survey-fees for pottas and some minor items. This revenue is naturally fluctuating. The average annual collections for the period 1901—1913 were Rs. 18,676. Miscellaneous land-revenue.

There are no salaried stamp-vendors. The licensed vendors, who numbered 74 in 1911-12, are paid by discount. The Treasurer at headquarters and the Sub-Treasury Officers at township-headquarters, are *ex-officio* vendors. A Magistrate at headquarters is appointed Special Stamp Officer, and is responsible under the Deputy Commissioner for keeping a check on this revenue. The collections are fluctuating, and in 1905-06 and 1908-09 were over a lakh of rupees, while in 1906-07 they were less than Rs. 84,000 and in 1912-13 stood at Rs. 97,742. Fines and penalties show a steady increase since 1905, which seems to indicate growing attention on the part of Revenue Officers to this part of their duties. Stamp revenue.

The Income-tax Act is in force throughout the district. The average number of assessees for the period 1901—1913 was 516. The collections show an upward tendency and in 1912-13 stood at Rs. 31,721. The Deputy Commissioner is Commissioner of Income-tax and the Subdivisional Officers are Collectors for their respective subdivisions. The assessees are mostly traders, particularly traders in grain and money-lenders. Income-tax.

The administration of the Excise Department has been dealt with in Chapter IX. The excise revenue shows a Excise revenue.

marked increase, having more than doubled since 1902. The increase comes both from opium and from liquor. The opium revenue reached its zenith in 1907-08, when it brought in Rs. 1,68,966; the revenue from liquor in 1910-11, when Rs. 1,75,337 were realised. The total revenue from both sources in 1912-13 was Rs. 3,30,530.

Salt. The salt industry has ceased to exist in the district, imported salt being so cheap that the local manufacture would not pay the cost of supervision, and is forbidden by the orders of Government (Burma Salt Directions, 1910, paragraph 3).

Collection of revenue. The greater part of the revenue of the district is collected by village headmen, who are paid as commission a fixed percentage on their collections. Arrears for the recovery of which it is necessary to invoke the aid of the Revenue Courts generally form considerably less than 2 per cent. of the total demand. In the course of recovery-proceedings sales of immoveable property are fairly frequent; sales of moveable property and imprisonment are rare. On an average more than three-quarters of the arrears of which the recovery is sought by process are realised.

CHAPTER XI.

LOCAL SELF-GOVERNMENT.

Toungoo Municipality. The Toungoo Municipal Committee was constituted in 1874 and at present consists of three *ex-officio*, six nominated and six elected members. The *ex-officio* members are the Deputy Commissioner, the Civil Surgeon and the Executive Engineer, P.W.D. It has an office establishment of a Secretary, an Engineer and three clerks.

Income. The principal heads of income are—

(*a*) tax on houses and lands within the municipal limits, assessed at the rate of 1 pie per square foot and producing (1911-12) Rs. 20,219;

(*b*) conservancy (including scavenging) rate, assessed at 3 pies per square foot and producing (1911-12) Rs. 42,117;

(*c*) lighting-rate, at $\frac{3}{4}$ pie per square foot, producing Rs. 14,781;

(*d*) markets and slaughter-houses (Rs. 60,157);

and a number of smaller items, including road-and-ferry-tolls, taxes on animals, pawnshop and hackney-carriage receipts and fines for breaches of municipal regulations. There are 3,426 ratepayers, and the gross receipts for 1911-12

were Rs. 1,84,882, more than double the figure ten years ago. There is a large bazaar-building, at present under reconstruction, two cattle-pounds and two licensed pawnshops. For the registration of births and deaths the town is divided into two sections with a clerk in each.

The principal heads of expenditure are— Expenditure.

	Rs.
Conservancy	33,114
Hospital and Dispensaries	16,138
Roads	15,220
Schools	10,948

The present debt is Rs. 50,842. The municipality maintains about 24 miles of roads.

The Shwegyin Municipal Committee was constituted in 1888 and consists at present of three *ex-officio* members and eight persons nominated by the Commissioner, Tenasserim Division. The office establishment consists of a Secretary, a clerk and one menial. Shwegyin Municipality.

The principal heads of income are-- Income.

(*a*) revenue from markets and slaughter-house, producing (1911-12) Rs. 15,006;

(*b*) fees and revenue from educational institutions (Rs. 9,938);

(*c*) tolls on roads and ferries (Rs. 4,117);

(*d*) tax on houses and lands (Rs. 3,062);

(*e*) lighting-rate (Rs. 1,655);

The total income in 1911-12 was Rs. 35,327.

The principal heads of expenditure are— Expenditure.

	Rs.
Education	13,893
Hospital and Dispensary	5,011
Conservancy and road-cleaning ...	2,155
Lighting	1,871

There is a cattle-pound and slaughter-house. The total establishment paid from municipal funds numbers 49. There are 1,322 rate-payers;

The two municipalities are the only self-governing institutions. The District Cess Fund is under the control of the Deputy Commissioner. Its total income in 1911-12 was Rs. 2,03,774, of which the principal sources are— District Cess Fund.

(*a*) cess of 10 per cent. on land-revenue-collections (Rs. 74,802);

(*b*) stall-rents and daily collections in bazaars maintained by the fund (an item which is rapidly expanding) (Rs. 50,390);

(c) ferries, of which there are twenty, the exclusive right being sold for a year or term of years, also a growing source of revenue (Rs. 19,230);

(d) slaughter-house licenses (Rs. 20,682);

(e) cattle-pound fees and fines (there are nine pounds in the district) and the sale-proceeds of unclaimed cattle (Rs. 7,616).

Expenditure. The principal heads of expenditure are—

	Rs.
Civil Works and Repairs (maintenance of roads, travellers' bungalows, etc.	63,968
Education (grants to schools, rewards, etc.)	31,774
Medical and Sanitary	17,147

CHAPTER XII.

EDUCATION.

Administration. It has been seen (Chapter III) that Christian missions have long been established in the Toungoo district and have shown great activity, and it follows from this that Toungoo is an important educational centre, though the outlying parts of the Tantabin and Kyaukkyi townships are still very backward. The district contains two educational subcircles, A and B, with headquarters at Toungoo and Pyu. A third Deputy Inspector is in charge of Karen schools throughout the district. These three officers are subordinate to the Inspector of Schools, Tenasserim Circle. The Inspector of European and Normal Schools is in charge of two secondary schools for both sexes at Thandaung, with a total of 64 pupils, and two at Toungoo, with a total of 138 pupils, and also of the Government Normal School at Toungoo with 38 pupils.

Toungoo A. The A sub-circle, comprising Toungoo, Yedashe and Ôktwin townships, includes several Anglo-Vernacular schools in Toungoo town belonging to the Roman Catholic, Church of England and American Baptist Missions. There are 82 registered vernacular public schools, of which 43 are conducted by laymen and 39 by monks. The pupils number 2,451 boys and 855 girls. There are also eight special monastic schools preparing 178 pupils for the Patamabyan examination. There are 213 private schools, *i.e.* schools which do not conform to the departmental standard of examination, with 1,855 pupils, all boys. Rupees 5,724 were expended in results grants during the year 1912-13.

Toungoo B. The B sub-circle comprises the Pyu, Tantabin, Kyaukkyi and Shwegyin townships There are two anglo-verna-

cular schools at Shwegyin and one at Pyu. There are 80 public vernacular schools, 41 kept by laymen and 39 by monks, with 2,626 boys and 961 girls. The private schools number 128 with 1,165 pupils. Rupees 5,823 were expended in results grants in the year 1912-13, principally from the District Cess Fund, which also pays the salaries of teachers in certain schools.

The Karen schools are all Christian, and are distributed among the townships as follows:— Karen schools.

Township.	Number of schools.	Pupils.	
		Boys.	Girls.
Leiktho	43	539	302
Tantabin	31	326	254
Kyaukkyi	8	146	71
Pyu	3	49	25
Ôktwin	1	10	23
Yedashe	2	47	14
Toungoo (Myoma) ...	3	27	45
Toungoo Town ...	3	103	75
Total ...	94	1,247	809
		2,056	

Rupees 6,870 are expended on grants and Rs. 3,839 on salaries of teachers, principally from the District Cess Fund.

In spite of this educational activity, the standard of literacy in the district is low, being only 22·10 per cent., or considerably less than in any district in the Pegu and Delta Divisions. The percentage is the same as that for the whole province including the wild tribes of specially administered tracts. Of religious communities, the Buddhists have 24·63 per cent. of literates, the Christians only 17·39; on the other hand, the equality of the sexes is better observed by Christian teachers, the proportion of literate males to females being 33 to 23 as against 600 to 79 among the Buddhists. Christian children also, beneath the age of 15, are more literate than Buddhists, the figures being 9·43 against 7·66, and this is natural in view of the comparatively recent growth of Christian schools. The Mahomedans have 24·37 per cent. of literates, nearly the same as the Literacy.

Buddhists, while the Hindus have 10·63 and the Animists less than 5 per cent.

On account of the number of English schools the standard of literacy in English is higher than that of any district except Rangoon, Mandalay and Amherst (Moulmein).

CHAPTER XIII.

PUBLIC HEALTH AND JAILS.

Registration.

The registration of births and deaths is in force in the district. In 1905 it was noted that it was badly done and in the following year the Sanitary Commissioner indicated that it had improved; but since that date both the birth-rate and the death-rate for the district have usually been considerably lower than the figures for the whole of Lower Burma and, though this may be partly explained by immigrations, it is probably also due to imperfect registration in the backward tracts. The birth-rate for 1911 (25·44 per thousand) appears to be the lowest in Burma and that for 1912 is still lower (24·88). The ratio of male to female births is generally high and this must indicate a defect of registration, but the cause is not known.

Diseases.

Until 1911 the deaths registered as due to fevers were fairly constant in number and the rate was well above the rate for the whole of Lower Burma. Malaria is, perhaps, more prevalent here than in most districts. But from 1911 the numbers of deaths attributed to fevers have diminished and it may be that the change is merely due to a more accurate method of record and that the old figures were incorrect. Deaths from cholera, of course, fluctuate. In 1908 a serious epidemic took place and there were 1,025 deaths from this cause; the infection was said to have been brought up the Sittang by boatmen from the Thatôn district. After 1909 the disease appears to have abated and since then the figures have been low. Small-pox has been serious in most years and in 1911 claimed 428 lives. Since 1906 there have been annually between two and three hundred victims of plague and in 1911 there were 149 deaths from this scourge in Toungoo town alone. The infantile mortality of the district was remarked on in 1908 as being high, but since that year it has not apparently called for special notice.

In rural areas sanitation is undoubtedly defective; there is seldom any drainage-system, the accumulation of filth in villages affords a home to flies which act as disease-carriers and the low plank floors of houses allow great heaps of rubbish to collect and shelter rats. Water is obtained from shallow wells, rivers and tanks, all of which are more or less open to contamination; the wells are seldom protected adequately and the habits of the people in respect of their water-supply are generally slovenly. A few tube-wells have been sunk lately but have not all yielded good water. Sanitation.

Vaccination appears to make no great progress in the district. Both in 1909-10 and in 1911-12 operations showed an increase, but in the latter year it was remarked that the total number was ridiculously small. The number of persons successfully vaccinated per 1,000 of the population is low as compared with other districts, being in 1912-13 a little over 25. The duties of the Civil Surgeon in connection with the headquarters jail and hospital prevent him from doing much touring and inspection. Vaccination.

The sale of quinine tablets instead of powders was introduced in 1908. Although they are so cheap, the quantities sold in the district are insignificant, less than five thousand tablets having been disposed of in 1912. The facilities for purchasing them are at present inadequate and the people generally cannot be said to have much idea of their efficacy. There is a good deal of malaria in the district even among persons who have lived all their life there and considerable sales might be effected if the use of the drug could be popularised. Quinine

There are third-class hospitals at Toungoo and Shwegyin. At Toungoo there are somewhat over ten thousand patients treated per annum and this number has not increased in the last few years. At Shwegyin the numbers are rather larger and appear to be on the increase. The number of in-patients, however, is much greater at Toungoo, where there are twice as many beds available, and is generally about 10 per cent. of the total. Of the in-patients at the two hospitals only about 12 per cent. are women; but if Toungoo be taken by itself the percentage is somewhat higher. Very few children receive treatment. The dispensaries at Thandaung, Pyu and Kyaukkyi treat some thousands of patients annually and the numbers appear to be growing rapidly. Hospitals and Dispensaries.

There are jails at Toungoo and Shwegyin. At the Toungoo jail there are four jailors and thirty-four warders. The Jails.

number of convicts is growing rapidly. In the two years, 1903 and 1904, there were 995 admissions; in 1911 and 1912 there were 1,895. In the same period the number of female prisoners has increased from 40 to 186. The Shwegyin jail has two jailors and nineteen warders. The admissions have increased from 549 in 1903 and 1904 to 760 in 1911 and 1912. There is no increase in the number of female prisoners. Besides convicts, both jails house under-trial prisoners and civil prisoners; the latter do not seem to be increasing in numbers. The nett annual cost of the maintenance of a prisoner, that is, the gross cost minus his earnings, was Rs. 32 in 1904 and Rs. 47 in 1912 at Toungoo. At Shwegyin it is higher, perhaps owing to the greater cost of *kaukkyi* rice.

CHAPTER XIV.

MINOR ARTICLES.

Toungoo Town.

The town of Toungoo (properly Taung-ngu) is situated on the right bank of the Sittang, about two miles above the mouth of its tributary the Kabaung, in north latitude 18°56′ and east longitude 96°27′; 166 miles by rail from Rangoon.

The original city of Toungoo (Dinnyawadi) was near the junction of the Kabaung and Pabè streams, about six miles west of the present site, and was founded according to legend in 1279 A.D. (*see* Chapter II—History). In 1491 Mingyinyo moved the seat of Government to Dwayawadi (now called Myogyi) about a mile to the south-east of the present city, and on the bank of the Sittang. In 1510 he founded Ketumati, the present city of Toungoo. It is nearly rectangular in form, and is surrounded by a moat, 170 feet wide, and by a great wall, 5 miles in length. Within the wall, in the south-west of the city, is a lake covering over 100 acres, said to have been excavated by the founder. In the south-east corner is a brick fort, built after the annexation of 1852.

The present Burmese town lies mainly within the old walls and moat, as do the police-station, jail, hospital and railway-station. The other official buildings and the civil station lie outside, to the east and south-east, and here until 1893 was the cantonment. The court-house stands on the bank of the river, which at this point is crossed by a large

iron bridge carrying the Thandaung road ; the post-office, municipal, forest and Public Works Department offices and the circuit-house and dâk-bungalow, together with most of the residences of European officers, lie within a mile south of the court-house. There is an extensive recreation-ground, with a race-course round it, and to the south lie the military police lines and rifle-range and the European cemetery.

Toungoo contains educational and religious establishments of the Roman Catholic Mission, the Society for the Propagation of the Gospel and the American Baptist Mission. There is a Government Normal School and a survey-school for the training of revenue-surveyors.

The principal ancient buildings of Toungoo are the Shwesandaw, Myasigôn and Lawkoktaya pagodas (*see* Chapter II—Archæology).

In addition to the ordinary civil officers of the district, the following officials have their headquarters at Toungoo: the Divisional and Sessions Judge of Toungoo and Pegu, the District Judge of Toungoo and Pegu, the Adjutant and Assistant Adjutant of the Toungoo Battalion of Military Police, the Deputy Conservators of the two Toungoo Forest Divisions, the Executive Engineer of the Toungoo Public Works Division with the officers-in-charge of the headquarters and Karen Hills subdivisions, and the Deputy Inspectors of Karen Schools and of Burmese Schools (Toungoo A). For the purposes of the administration of the Burma Railways the town is the headquarters of a District Traffic Superintendent and District Engineer.

The town is prosperous, although there is no single very important industry. There are several sawmills, a rice-mill, a distillery and a tannery. A considerable quantity of the produce of the Karen Hills, betel-nut and betel-leaf, is brought to market in the bazaar. A yearly average of 2,700 tons of unhusked rice is exported by rail between November and the middle of April. The Myogyi quarries just outside the town furnish a regular supply of granite for use as road-metal. The town has for many years been the seat, and since 1881 the headquarters of the timber-firm of Macgregor and Company (formerly Darwood and Goldenberg), who have a purchase-contract expiring in the year 1924 for the extraction of teak from the whole of the two Toungoo Forest Divisions except the fuel-reserves. The firm employs 21 European assistants. The Toungoo coffee consists of imported berries roasted and ground in Toungoo by the firm of Messrs. Petley, who own the Nancho plantation north of Leiktho which had to be abandoned owing to leaf-disease.

The population of Toungoo at the last five enumerations is shown below :—

1872	...	...	...	10,372
1881	...	...	...	17,199
1891	...	...	...	19,232
1901	...	...	...	15,837
1911	...	...	...	18,546

The decrease between 1891 and 1901 is due largely to the removal of the troops in 1893. At the present time the town is growing steadily. The following figures show the percentage of adherents of the different religions at the last two enumerations :—

—		1901.	1911.
Buddhist	...	70	59
Hindu	...	10	16
Mahomedan	...	13	14
Christian	...	4	7
Animist	...	2	4

For an account of the Toungoo Municipality, *see* Chapter XI—Local Self-Government; of the Jail, Hospital and Dispensary, Chapter XIII—Public Health.

oungoo bdivi- on.

One of the three subdivisions of the district, comprising the Yedashe, Toungoo (Myoma) and Leiktho townships. Its headquarters are at Toungoo and it includes the whole of the northern part of the district. The boundaries on the north, east and west are the district boundaries ; on the south it marches with the Pyu subdivision, from which it is divided by a line starting on the western border of the district and following the watershed between the Swa and Kabaung streams to a point in 19°5′ N. and 96°6′ E.; thence following the watershed between the Chaungmangè and Pabè tributaries of the Kabaung to the north-west corner of Gyobinzeik *kwin* (579); thence following the boundaries of the Kywèdaing (603), Kanyinmyaung (580), Ôkpo (582), Bogadaw (583), Kywègyaung (554), Magyigôn (555), Hlèbu (557) and Tatkyaung (558) *kwins*, lying to the north and east, to the Kabaung stream ; thence the Kabaung stream to its mouth ;

thence the river Sittang to the mouth of the Thaukyegat stream; thence up the Thaukyegat stream to the confluence of the Kolo; thence the Kolo and Bahulo streams to the source of the latter; thence the watershed between the Pulo and Polo streams to the district boundary.* The area is 1,917 square miles and the population in 1911 was 120,632, inhabiting 27,025 houses. The subdivision in its present form dates from 1905. Before that date Leiktho township formed part of the Karen Hill Tracts subdivision, now abolished, while the Pyu and Ôktwin townships belonged to Toungoo subdivision.

Yedash[e] townshi[p]

The north-western township of the district, in the Toungoo subdivision, has an area of 853 square miles and a population (1911) of 49,550, living in 11,291 houses. It was formerly known as the Thagaya township. The boundaries on the north and west are the district boundaries; the southern limit follows the subdivisional boundary (*see* the article on Toungoo subdivision) from the crest of the Pegu Yoma to a point in 19°5′ N. and 96°6′ E.; thereafter it is divided from Toungoo township by a line following the watershed between the Swa and Samo streams and the drainage to the south of these streams to the west corner of Maudôn *kwin* (667); thence following the southern boundary of the Maudôn, Sakangyi (669), Saingtamaw (670), Nangyun (674), Myethnabyin-in (675), and Tauktataw (676) *kwins* to the bank of the Sittang; thence the Sittang to the mouth of the Kayin stream; thence the Kayin stream to its junction with the Tonchauk stream, at which point the Leiktho, Yedashe and Toungoo (Myoma) townships meet. The boundary with Leiktho township is described in the article on Leiktho township. The headquarters is Yedashe, situated in the south-east of the township. Ninety-five per cent. of the population are Buddhists.

Myohl[a]

A village in the north of Yedashe township, situated near the confluence of the Myohla stream with the Sittang, 35 miles north of Toungoo and 202 miles by rail from Rangoon. There are 407 houses, a police-station with 17 men, railway-station, post-office, Government bazaar and Public Works Department inspection bungalow. The village contains a licensed shop for the retail sale of foreign spirit. The main road running from south to north crosses from the west to

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* This is the boundary as shown in the 1-inch map; but General Department Notification No. 77 of 1906, dated the 22nd March, 1906, states that it "runs along the Thaukyegat *chaung* up to the eastern boundary of the Toungoo district," a division which is not adopted in practice.

the east side of the railway in the village. Myohla is a town for the purposes of the Lower Burma Town and Village Lands Act, 1898. It is a revenue-station of the Forest Department and there is a sawmill owned by a Toungoo chetty, employing about 35 hands.

wa. A village in Yedashe township, about 8 miles north-north-east of the headquarters and 2 miles west of the Sittang. It has a railway-station (192 miles from Rangoon) and a Public Works Department inspection bungalow. About half a mile to the south the railway crosses the Swa, one of the principal tributaries of the Sittang, by an iron bridge. The main road runs from south to north on the west side of the railway through the village. There is a licensed shop for the retail vend of foreign spirit. Swa is a Forest revenue-station and contains two sawmills. There are 139 houses. The village is modern and owes its foundation to the advent of the railway. It is a town for the purposes of the Lower Burma Town and Village Lands Act, 1898.

iagaya. A village in Yedashe township, 196 miles by rail from Rangoon, 4½ miles north of Swa and about a mile west of the Sittang. It is the headquarters of a Forest Ranger and has a railway station, a Government bazaar and a Forest Department rest-house. There is also a sawmill employing about 45 hands and a licensed shop for the retail sale of *tari*. The main road from south to north runs a little to the west of the railway. There are 345 houses. The village was founded about 50 years ago by immigrants from Toungoo township and from Upper Burma. At Letpangôn about a mile to the east there is a licensed ferry crossing the Sittang to Hngetpyawdaw. Thagaya adjoins a very fertile tract of rice land and exports annually by rail an average quantity of 2,630 tons of grain between November and the middle of April. The Thadawya and Diwa pagodas near Thagaya are said to have been founded by Bodawpaya, king of Amarapura, during an expedition against a rebellious son (*see* Chapter II—History).

dashe. Headquarters of the township of the same name, situated 184 miles by rail from Rangoon, about seventeen miles north of Toungoo and five miles west of the Sittang. It has a court-house, railway-station, post-office, Government bazaar and Public Works Department inspection bungalow. There is a police-station with 15 men and a post of 15 miltary police. There is a large vernacular mixed school giving instruction up to the VIth Standard and a Roman Catholic primary school for Karens. The main road from

south to north runs along on the east of the railway line, crossing to the west about a mile north of the village. The Karenchaung road leaves the village on the east (*see* Chapter VII). Yedashe is a small market-town, deriving its importance mainly from its position on the railway and the presence of the township headquarters. There is, however, a sawmill and a large rice-mill near the railway-station, each employing about 30 hands, which give the place some small commerical importance. From the railway-station an average quantity of 4,798 tons of unhusked rice is exported annually between November and the middle of April. Yedashe is a town for the purposes of the Lower Burma Town and Village Lands Act, 1898. It has 489 houses. There are licensed shops for the retail vend of foreign spirit, beer and country fermented liquor. The place is a Forest revenue-station and the headquarters of a Ranger. The name of the village of Bodawgon, about a mile to the east, is said to commemorate a visit of King Bodawpaya.

Yinganbauk.

A village in Yedashe township, about 13 miles west of Swa railway-station. It has a police-station with twelve men. The village contains 184 houses and a population of 560.

Toungo (Myom townshi

Township in the Toungoo subdivision, with an area of 270 square miles and a population (1911) of 53,302 living in 11,773 houses. The northern boundary, separating it from Yĕdashe township, has been described in the article on Yedashe township; the southern and south-western boundary is the same as the boundary of Toungoo subdivision (*see* above). On the east it is divided from the Leiktho township by a line starting from the junction of the Kayin and Tônchauk streams at the south-east corner of Yedashe township and running up the Tônchauk stream and along the eastern boundary of Tônchaukchaung *kwin*; thence along the eastern boundaries of Gyôngyôngya (505), Thèda (504), Kyauktaga (501), Kywèthe-in (500), Gônminaing (499), Kanni (496), Seikpudaung (495) and Shwele-in (492) *kwins* to the Pathi stream; thence up the Pathi stream till it meets the north-west boundary of Thandaung Forest Reserve; thence along the Reserve boundary (1885) in a north-easterly direction till it reaches the summit of Nattaung; thence along the present Reserve boundary in a south-easterly direction to a point five hundred yards north-east of the Thandaung Circular Road; thence along a line parallel to the said road but five hundred yards east and south of it to the Pyôn stream; thence down the Pyôn stream till it meets the northern boundary of the Pyônchaung

Forest Reserve; thence along the northern and eastern boundaries (1871) of this Reserve to the eastern boundary of Nagamauk *kwin* (472); thence up to the Thaukyegat stream, where it meets the subdivisional boundary. The present limits date from 1903, before which year Thandaung was included in the Leiktho township.

The township contains one town (Toungoo—see above) and the hill-station of Thandaung.

Although Toungoo has long been a centre of missionary activity, less than five per cent. of the population of the township are Christians.

Kyun-gôn. A village in Toungoo township, situated on the railway, nine miles north-west of Toungoo and about four miles west of the Sittang. The main road from south to north passes through it, running on the east of the railway line. There is a Public Works Department inspection bungalow, a saw mill employing about thirty hands, and a licensed shop for the retail vend of *tari*. The village contains seventy-four houses. The average annual export of unhusked rice by rail between November and the middle of April is 2,095 tons.

Thandaung. Hill-station in Toungoo (Myoma) township, twenty-two miles north-north-east of Toungoo, with which it is connected by a carriage-road maintained by the Public Works Department. It was formerly intended to be occupied regularly as a military sanitarium and in 1883 a cantonment was marked out, but in the following year the project was abandoned. It lies on a ridge 4,200 feet above the sea, with extensive views of the hills to the north, east and south, while to the west the whole breadth of the Sittang valley can be clearly described, with the range of the Pegu Yoma beyond. The climate is cool and healthy, the thermometer seldom rising above 70° even in the hot season. The rainfall is very heavy, averaging 225 inches per annum and falling mainly between May and October. There is a police-station with fifteen men, a hotel, circuit and district bungalows, a post and telegraph office, two European boarding-schools with sixty-four pupils, of whom twenty-three are girls, and a number of private houses. The population at the census of 1911 was 219. Thandaung is a town for the purposes of the Lower Burma Town and Village Lands Act, 1898. There is a licensed shop for the retail vend of foreign spirit and foreign fermented liquor.

Leiktho Township. A township in the north-east of the district, forming part of the Toungoo subdivision, with an area of 794 square miles and a population of 18,050 inhabiting 3,961 houses. The northern and eastern boundaries are the district

boundaries; the southern is the subdivisional boundary described in the article on Toungoo subdivision; on the west it is divided from Toungoo (Myoma) township by a line described in the article on Toungoo township, and from Yedashe township by a line starting from a point on the Yamèthin district boundary at the north-east corner of Teinbyingwe East *kwin* (758); thence along the eastern boundary of that *kwin* to its junction on the Thitpya stream with the boundary of the Gwethe Reserve; thence the northern, eastern and southern boundaries (1884) of that Reserve to the source of the Thitnathagyi stream; thence down the Thitnathagyi stream to its junction with the Togyaung stream; thence up the Togyaung stream to its source on the bridle-path from Karenchaung to Tôndaung; thence south-west along the bridle-path for about a quarter of a mile to the source of the Udo stream; thence down the Udo stream to its junction with the Banbon stream; thence along a straight line running due south for three-quarters of a mile to the source of the Kyauksè stream; thence down the Kyauksè stream to its junction with the Kayin stream, and down the Kayin stream to its junction with the Tônchauk stream, where it meets the boundary of the Toungoo township.

The population consists almost entirely of Hill-Karens and 90 per cent. are Christians. The township is a mass of hills with an ample rainfall and the cultivation is principally *taungya*.

Leiktho. Headquarters of the township of the same name, a Karen village about twenty-seven miles to the north-east of Toungoo, with forty houses and a population (1911) of 280. There is a court-house, police-station with twenty-two men, a post-office and a travellers' bungalow. Leiktho is a centre of the Roman Catholic Mission and the seat of the Vicar Apostolic of Eastern Burma. There are three priests, a convent with primary school for Karen girls and an orphanage and middle school for Karen boys, with fifty-eight pupils. Leiktho is connected by bridle-paths with Thandaung (twenty-two miles), Yado (twenty-eight-miles) and Kanni on the Sittang near Toungoo (twenty-two miles). There is also a bridle-path to Nancho, an abandoned coffee-plantation eight and half miles to the north.

Yado. A Karen village east of Leiktho, founded about 1863, and situated within a mile of the border of the Shan State of Möngpai and 3,598 feet above the sea. It has twenty-four houses and a population (1911) of 110. There is a police-outpost, with seven men, and a travellers' bungalow. Yado is the residence of a Roman Catholic priest and there

is an orphanage and primary vernacular school for Karen boys. Yado and the neighbouring villages, though lying to the west of the watershed, were for many years not considered as being in British territory. In 1882-83 serious local feuds involving villages beyond the true frontier necessitated a visit from the Assistant Commissioner, Karen Hills, and since then the valley has come under effective administration. There are extensive limestone caves in the rocky hills east of the village, two of which are said to extend for more than half a mile underground. From one of these caves saltpetre is extracted and a considerable manufacture of gunpowder was formerly carried on, but this has now been stopped.

Pyu subdivision.

The central subdivision of the district, comprising the Pyu, Ôktwin and Tantabin townships. Its headquarters are at Pyu (see below), and it was constituted in 1905, the Pyu and Ôktwin townships having previously formed part of the Toungoo subdivision, and the Tantabin township of the Karen Hills subdivision (now abolished). It has an area of 2,586 square miles, and a population (1911) of 161,621.

The western, north-eastern and south-eastern boundaries are the district boundaries; the northern boundary has been described in the article on the Toungoo subdivision; on the south-east it is divided from the Shwegyin subdivision by a line starting on the district boundary with Karenni and following the watershed between the Yaukthawa and Môn streams to the source of the Mègwa stream; thence the Mègwa and Yaukthawa streams to the Sittang river; thence the Sittang to the mouth of the Kun stream, where it joins the district boundary. The Pyu subdivision has developed rapidly of late years and cultivation has extended here faster than in any other part of the district. Commercially it is well served by the railway, having nine stations within its borders.

Pyu township.

A township occupying the south-west corner of the district, with an area of 773 square miles and a population (1911) of 70,300 inhabiting 15,049 houses. The western and southern boundaries are the district boundary: on the east it is divided from the Shwegyin subdivision by the river Sittang; on the north-east it is divided from Tantabin township by the Sittang; and on the north from Ôktwin township by a line * starting on the Sittang at the south-east corner of *kwin* 278 (Taungsho) and following the south

* The boundary is described as well as it can be made out from the 1-inch map; it was never notified and attempts to obtain a local account of it have been unsuccessful.

boundary of *kwins* 278, 277 (Paukkôn), 276 (Nyaungchedauk), 272 (Ngayôksein), and the west boundary of *kwins* 272, 273 (Kyaungbein), 274 (Payahnasu west), and of the Nyaungchedauk Fuel Reserve, and of *kwins* 296 (Kogwashaung) and 297 (Peinnèchaung), to the north-west corner of *kwin* 297; thence westwards to the watershed between the Pyu and Kabaung streams and along it to a point about 96° 8′, east by 18° 44′ north, whence it runs south-west to the confluence of the Pyu and Ledu streams, and up the Pyu to the confluence of the Sun stream, whence it runs west to the Tharrawaddy boundary. Of the population 85 per cent. are Buddhists and over 10 per cent. Hindus, most of whom have immigrated since 1901 and are cultivators on the Zeyawadi grant (see Chapter X—Revenue Administration).

Kanyutkwin. A village in the Pyu township, situated on the railway 124 miles from Rangoon, 11 miles south of Pyu, on the main road from Toungoo to Pegu, 2 miles north of the Kun stream which forms the boundary of the Pegu district and about 12 miles west of the Sittang. It has a police-station with 18 men, military police-post with 15 men, a post office, Government bazaar, Public Works Department inspection bungalow and is a Forest revenue-station. There are two registered vernacular middle schools with 131 pupils, and six primary schools with 283 pupils. A road is projected across the plain to Meikthalin on the Sittang (12 miles) which will open up an important and productive tract of rice cultivation. Kanyutkwin contains licensed shops for the retail sale of foreign spirit, beer and country fermented liquor. It is a growing market-town and has a rice-mill. An annual average of 11,547 tons of unhusked rice is exported by rail between November and the middle of April. Kanyutkwin is a town for the purposes of the Lower Burma Town and Village Lands Act, 1898.

Nyaungbintha. A village in Pyu township, situated on the railway 129 miles from Rangoon and 6 miles south of Pyu. It is a Forest revenue-station and there are two small saw-mills owned by Indians. There is a registered primary vernacular school with 57 pupils. The village contains 183 houses and has a licensed shop for the retail sale of country fermented liquor. The main north and south road runs on the west of the railway. Nyaungbintha exports annually by rail an average quantity of 5,961 tons of unhusked rice between November and the middle of April.

Pyu. Headquarters of the Pyu township and (since 1905) of the Pyu subdivision, situated on the railway 135 miles from Rangoon and 32 miles south of Toungoo, on the south bank

of the Pyu stream, about 10 miles west of the Sittang and on the main road from Toungoo to Pegu. It is the headquarters of a Subdivisional Officer, a Subdivisional Police-officer, a Township Officer, a Township Judge (Pyu and Ôktwin), a Forest Ranger and a Deputy Inspector of Schools. It contains a court-house, police station with 22 men, military police-post with 25 men, post office, Government bazaar, Public Works Department inspection bungalow, district bungalow and is a Forest revenue-station. It is a town for the purposes of the Lower Burma Town and Village Lands Act, 1898. There are two registered middle schools with 26, pupils, one of them Anglo-vernacular, and two primary schools with 78 pupils. An embanked road leaves the village to the east for Ôkpyat ($11\frac{1}{4}$ miles) on the Sittang. There are licensed shops for the retail sale of foreign spirit and foreign fermented liquor and of country fermented liquor. Pyu is an important market and a centre of the rice trade. An annual average of 11,782 tons of unhusked rice is exported from the railway station between November and the middle of April. The place also contains a saw-mill. The population has grown rapidly within the last decade and there are now (1913) 823 houses.

ya-
di.

A village in Pyu township, on the railway 139 miles from Rangoon and 4 miles north of Pyu, about 10 miles west of the Sittang and on the main road from Toungoo to Pegu. It has a post-office and is a Forest revenue-station and, until 1900-01, was the headquarters of a Ranger. A small saw-mill employs about sixteen hands. There is a registered primary vernacular school with 27 pupils. Zeyawadi is said to have been founded by Mingyinyo, the builder of Toungoo, about the year 1510 A.D. At present it derives its only importance from being the store-house of the Dumraon grant (see Chapter X, Revenue Administration), and the inhabitants are largely Indian immigrants working as tenants on the estate. There are 152 houses. An annual average of 4,782 tons of unhusked rice is exported by rail between November and the middle of April.

:twin
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p.

Township in Pyu subdivision, with an area of 924 square miles and a population (1911) of 49,753 inhabiting 10,736 houses. The western boundary is the district boundary and the northern boundary is the subdivisional boundary; on the east the river Sittang separates it from the Tantabin township; on the south it marches with the Pyu township (for the boundary, see the article on Pyu township). Until 1905 it formed part of the Pyu (formerly called

Ôktwin and before that Zeyawadi) township. In that year it was decided to make it a separate township with headquarters at Ôktwin. The railway runs along the east of the township and there are five stations. Ninety-one per cent. of the population are Buddhists.

Kywèbwè. A village in Ôktwin township, situated on the railway 149 miles from Rangoon, 9 miles south of Ôktwin and 2 miles west of the Sittang. It has a post-office, a Public Works Department Inspection bungalow, and is a Forest revenue-station. There is a registered primary vernacular school with 66 pupils. The main road from Toungoo to Pegu passes through the village (17½ miles) running on the west of the railway. A short embanked road runs east (2 miles) to Myozo on the Sittang, where there is a saw-mill and a licensed ferry. Kywèbwè contains 369 houses. It is a town for the purposes of the Lower Burma Town and Village Lands Act, 1898. There is a licensed shop for the retail vend of country fermented liquor. The average annual rail-exports of unhusked rice amount to 8,804 tons between November and the middle of April.

Nyaungchedauk. A village in Ôktwin township, situated on the railway 143 miles from Rangoon, 15 miles south of Ôktwin and nearly 5 miles west of the Sittang, on the main road from Toungoo to Pegu (24th mile), which runs west of the railway. It has a police-station with 13 men, post-office and Public Works Department Inspection bungalow, and is a Forest revenue-station. There is a registered vernacular middle school with 92 pupils. The village contains 260 houses, and there is a saw-mill, employing about 43 hands, and a licensed shop for the retail vend of country fermented liquor. An average annual quantity of 5,524 tons of unhusked rice is exported from the railway-station between November and the middle of April. Nyaungchedauk is a town for the purposes of the Lower Burma Town and Village Lands Act, 1898.

Ôktwin. Headquarters of the Ôktwin township, a village situated at the 158th mile on the Rangoon-Mandalay railway, 8 miles south of Toungoo and 1½ miles west of the Sittang. The main road from Toungoo to Pegu passes through the village, running west of the railway. Ôktwin is the headquarters of an Additional Magistrate who is also Sub-treasury Officer, as well as of the Township Officer, and has a court-house, police-station with 21 men, military police post with 15 men, post-office, Government bazaar, Public Works Department Inspection bungalow, a seventh standard registered vernacular school with 74 pupils and a

registered primary school with 101 pupils. It is a Forest revenue-station and contains a saw-mill and a rice-mill. The village has grown at the expense of Ônbin, 2 miles away on the Sittang, since the advent of the railway. Some of the agricultural produce from across the Sittang comes to Ôktwin by boat and cart for export to Rangoon. The average annual exports of unhusked rice from the railway-station amount to 7,891 tons between November and the middle of April. There are licensed shops for the retail vend of foreign spirits, beer and *tari*. The village contains 531 houses. Embanked roads are maintained to Yetho, a village 3 miles to the west, and to Ônbin. Ôktwin is a town for the purposes of the Lower Burma Town and Village Lands Act, 1898.

Tantabin township. Eastern township of Pyu subdivision, with an area of 889 square miles and a population of 41,568 inhabiting 9,201 houses. It was formerly called the Bônmadi township. The headquarters were transferred from Tabye to Tantabin on the Sittang with effect from December 1st, 1894. The northern boundary is the subdivisional boundary (described in the article on Toungoo subdivision); the eastern boundary is the district boundary; on the south it is divided from the Kyaukkyi township by the subdivisional boundary (see the article on the Pyu subdivision); on the west the river Sittang separates it from the Ôktwin and Pyu townships. The population is largely Karen and 23 per cent. are Christians.

Tantabin. Headquarters of the township of the same name, a village situated on the left bank of the Sittang, which is crossed by a ferry; on the opposite bank a road runs to Toungoo (6 miles). Tantabin contains a court-house, police-station with 11 men, military police-post with 15 men, and Public Works Department Inspection bungalow, and is the headquarters of a Forest Ranger. There are retail shops for the sale of *tari* and country fermented liquor. An embanked road leads to Natywa (6½ miles). Bullock-caravans bring betel-nut and other produce across the hills from Karenni. There is a registered vernacular primary school with 76 pupils. The village contains 466 houses.

Shwegyin subdivision. Subdivision in the south-east of the district, consisting of the Kyaukkyi and Shwegyin townships. It has an area of 1,669 square miles, and a population (1911) of 68,823 inhabiting 14,520 houses. On the east on south it marches with Salween and Thatôn districts; on the west it is divided from the Pegu district and the Pyu township by the river Sittang; the northern boundary is described in the article

on Pyu subdivision. Until the year 1895 it formed part of the old Shwegyin district, which in that year was divided up between Toungoo, Pegu and Thatôn. In 1873 the village of Leinbin near Môn was transferred from the Toungoo to the Shwegyin district owing to a change in the course of the river, and it now forms part of the subdivision. Shwegyin is a mass of hills, with a strip of flat land down by the Sittang growing narrower as one proceeds to the south.

Kyaukkyi township. Northern township of Shwegyin subdivision, with an area of 1,048 square miles and a population (1911) of 40,447 living in 8,591 houses. The eastern boundary is the district boundary; the northern and western boundaries are the subdivisional boundary (see the article on Pyu subdivision); on the south it is divided from the Shwegyin township by a line starting on the district boundary and following the watershed between the Shwegyin and Melapu streams to the source of the Chaunaulan stream; thence that stream to its junction with the Lewa stream; thence the Lewa stream to its junction with the Shwegyin stream; thence the Shwegyin stream to the confluence of the Kanyinthônbin stream; thence running up the Kanyinthônbin stream to the road from Thanzeik to Sawpedo; thence southwestwards along that road to Wadaw-atet village; thence down the Tat stream to the main road from Kyaukkyi to Shwegyin; thence along the main road to the south-east corner of Yôndaing *kwin* (19); thence along the southern boundaries of Yôndaing, Waingtaw (17) and Waing (16) *kwins* to the river Sittang. At the 1911 Census 31 per cent. of the population were returned as Animists, *i.e.*, Karens neither Christians nor Buddhists.

Kyaukkyi. Headquarters of the township of the same name, situated immediately at the foot of the Karen Hills on the Kyaukkyi stream about 6 miles east of the Sittang and 34 miles by road from Shwegyin. In the rains it is approachable by boat from Shwegyin up the Sittang and the Kyaukkyi stream. An embanked road about 9 miles in length runs south-west from Kyaukkyi to Natthangwin, where the Sittang is crossed by a ferry, and the road continues 8 miles to the railway-station of Pènwègôn in Pegu district. The town lies in a curve of the stream, which runs in a gorge and is crossed by a high wooden bridge. Just outside the town is a steep rocky hill at the summit of which is situated the Chedawya pagoda and the footprint of Yahanda Shin Thilawi, a disciple who accompanied Gawdama, the Buddha, on his visit to Kyaukkyi. From this height on a

clear day a magnificent view is obtained over the valley of the Sittang.

The town contains a court-house, police-station with 12 men, military police-post with 15 men, hospital, post and telegraph office, Government bazaar, District Cess Fund bungalow and is a Forest revenue-station. There are 360 houses. It is a centre of the trade in betel-nut, but otherwise has small commercial importance. There is a registered vernacular middle school with 45 pupils, and a primary vernacular girls' school with 19. There are licensed shops for the retail sale of beer, country spirit and *tari*:

Kyaukkyi was a fortified town in Burmese times and in 1809 was destroyed by Shan raiders. At the time of the annexation it was the refuge of Maung Bwa, Governor of Martaban, who, however, fled before the British troops arrived. In 1885 it was attacked and for a few days mastered by Shan rebels (see Chapter II—History).

daing-
w.

Two villages on the Môn stream a little above Môn, in the Kyaukkyi township, containing extensive and valuable betel-nut gardens irrigated from the Môn, which are owned by wealthy Karens inhabiting the upper village and cultivated by Shans and Burmans from the lower village and from other parts. The owners sell the right of picking the nuts each year for a lump sum to Burmese traders. The "pet", or fibrous sheath of the palm branch, fetches a high price as a cheroot-wrapper and covers all the cost of irrigation. The villages contain 219 houses and, in the upper village, there is a registered vernacular upper primary school with 39 pupils and a forest rest-house. To the north there is a conspicuous pagoda on a steep hill called the Ayadawdaung.

n.

A village in Kyaukkyi township, on the south bank and near the mouth of the Môn stream, about 18 miles north-north-west of Kyaukkyi. It was founded about 1801 by settlers from Kyaungbya, a few miles to the south, and deserted thirty years later on account of the oppression of the Governor of Kyaukkyi, but afterwards again colonized. In 1856 it was attacked by a Karen rebel from the hills who was driven off by a British garrison. It has a police-station with 14 men, and a District Cess Fund bungalow. There is a registered primary vernacular school with 33 pupils, built by Government. The village contains 301 houses and the population is engaged principally in the industry and commerce of betel-nuts, which are obtained from the Karen villages of Midaingdaw and Paungzeik and from numerous

plantations in the hills. In the rains the stream is navigable for a few miles above Môn.

Shwegyin township. Township in the south-eastern corner of the district, with an area of 621 square miles and a population (1911) of 28,376 inhabiting 5,929 houses. The eastern, southern and western boundaries are the district boundaries; on the north it is divided from Kyaukkyi township by a line which has been described in the article on Kyaukkyi township. Shwegyin township is a mass of hills sloping down to the Sittang which forms its western border. Ninety per cent. of the population are Buddhists.

Shwegyin. Headquarters of the subdivision and township of the same name and, until 1895, of the Shwegyin district, which in that year was divided up between Toungoo, Pegu and the newly-formed district of Thatôn, a town situated at the foot of the Karen hills, at the junction of the Shwegyin stream with the Sittang, which changed its course about twenty years ago and left the town some way to the east. Across the neck of land formed by the junction of the two streams is a laterite ridge on which the barracks formerly stood. The town is governed by a Municipality (see Chapter XI—Local Self-Government) and contains a court-house, police-station with 21 men, military police-post with 30 men, hospital, post and telegraph office, Municipal bazaar and Public Works Department Inspection bungalow. It is the headquarters of a Forest Division in charge of a Deputy Conservator and contains a saw-mill employing about 40 hands. There is a considerable trade in the produce of the hills and many caravans come from the Salween district and return laden with commodities from Rangoon. The town is surrounded by orchards, but the Shwegyin oranges, which are well known throughout the province, are not grown in or around Shwegyin. To the north there are several promising rubber estates; Shwegyin is connected by fairweather roads with Kyaukkyi (34 miles) and Kunzeik (22 miles). Its principal trade, however, is carried on with Nyaunglebin in the Pegu district, on the railway, the journey in the rains being by boat across the flooded plain, or up the Sittang to Pazunmyaung or Kwindala and thence by embanked road, and in the dry weather by cart track directly across the plain from Madauk on the bank opposite Shwegyin. The town contains licensed shops for the retail sale of foreign spirit and foreign fermented liquor and of *tari*.

The population at the Census of 1911 was 8,037. It has scarcely grown since 1872 and since the removal of the

district headquarters has been, if anything, on the decline. Only 82 per cent of the population are Buddhists; there is a considerable number of Chittagonians, who work as boatmen and date from the time of the military occupation, and there are some Christians, Shwegyin being an important centre of the activity of the American Baptist Mission, whose work here dates from 1853.

There is a seventh standard Anglo-vernacular school maintained by the Municipality with 100 male and 54 female pupils, a middle school with 28 pupils and four primary schools with 350 pupils.

List of Deputy Commissioners who have held charge of the Toungoo District since 1866.

[Information for earlier years is not available].

Serial No.	Name of officer.	Date of receiving charge.	Date of handing over.
1	Captain M. B. S. Lloyd ...	...	28-4-67
2	Major A. R. McMahon ...	29-4-67	14-5-69
3	Captain W. G. Hughes ...	15-5-69	25-8-70
4	Major M. B. S. Lloyd ...	26-8-70	23-6-76
5	Lieutenant T. M. Jenkins ...	24-6-76	18-7-76
6	Mr. A. H. Hildebrand ...	19-7-76	Jany. 1877
7	Mr. H. Buckle... ...	January 1877	Decr. 1877
8	Major G. A. Strover ...	Dec. 1877	2-11-82
9	Lieutenant J. M. Clements	3-11-82	9-11-82
10	Mr. A. R. Birks ...	10-11-82	2-2-83
11	Lieutenant-Colonel G. A. Strover.	3-2-83	4-3-84
12	Captain T. M. Jenkins ...	5-3-84	6-4-84
13	Lieutenant-Colonel W. G. Hughes.	7-4-84	14-7-87
14	Mr. W. C. Midwinter ...	15-7-87	27-11-90
15	Mr. G. M. S. Carter ...	28-11-90	7-9-93
16	Mr. E. A. Moore ...	9-9-93	13-10-93
17	Major W. F. H. Grey ...	14-10-93	17-7-94
18	Lieutenant Colonel T. M. Jenkins.	18-7-94	18-4-96
19	Mr. T. C. Mitchell ...	19-4-96	31-5-97
20	Mr. D. Wilson ...	1-6-97	17-2-98
21	Captain A. B. Pritchard ...	18-2-98	23-11-98
22	Mr. G. G. Collins ...	24-11-98	20-4-1900
23	Mr. N. S. Field ...	24-4-00	11-3-01
24	Mr. S. H. T. de la Courneuve	12-3-01	7-12-01
25	Mr. W. S. Morrison ...	8-12-01	9-12-01
26	Mr. N. G. Cholmeley ...	10-12-01	20-3-02
27	Mr. C. R. Wilkinson ...	21-3-02	8-11-02
28	Major D. J. C. Macnab ...	9-11-02	2-1-04
29	Mr. A. G. Cooke ...	3-1-04	4-12-04
30	Major H. A. Browning ...	5-12-04	12-3-05
31	Mr. J. S. Furnivall ...	13-3-05	6-4-05
32	Mr. A. H. Gayer ...	7-4-05	13-2-06
33	Mr. W. B. Brander ...	14-2-06	20-2-06
34	Mr. A. E. English ...	21-2-06	18-10-06
35	Mr H. C. Moore ...	19-10-06	28-12-06
36	Mr. O. S. Parsons ...	29-12-06	14-4-10
37	Mr. J. C. Mackenzie ...	15-4-10	9-5-10
38	Mr. G. Scott ...	10-5-10	22-8-10
39	Mr. H. O. Reynolds ...	23-8-10	30-9-10
40	Mr. G. Scott ...	1-10-10	8-12-10
41	Mr. A. H. Gayer ...	9-12-10	16-9-13
42	Captain G. R. K. Williams	16-9-13	...

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G. B. C. P. O.—No. 761, C. Secy., 10-9-1914—370—R. E. R.

TOUNGOO DISTRICT

Scale $\frac{1}{1,000,000}$ or 1·014 Inches to 16 Miles



Specially prepared for the Settlement Officer, Party No.5, Toungoo.

REG. No. 2827 E-13 H-370.